

THE

AMERICAN FARMER.



"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." Virg.

Vol. VI.

BALTIMORE, FEBRUARY, 1851.

No. 8.

For the American Farmer.

AGRICULTURAL SOCIETIES AND THE DE- LIBERATIVE EXERCISES THAT SHOULD ENGAGE THEIR ATTENTION.

It seems to be generally agreed that the establish-
ment of Agricultural Societies is one means, and
probably one of the best means of promoting agri-
culture. Their number has recently multiplied,
both in Europe and in this country, and besides our
county societies, now very generally established
throughout the best agricultural districts, north,
south and west, several of the States have orga-
nized State Societies—among them, New York;
Maryland and Ohio. These societies already em-
brace among their number and supporters, a large
body of men, representing much of the capital, en-
terprise and energy engaged in agriculture. How
to make the action of these associations the most
profitable and advantageous, becomes a question of
much practical interest. They have not always
succeeded, not even in prolonging an existence, nor
have the fruits of those that have struggled on been
always satisfactory to their friends.

The practice has generally been to make the
show grounds the almost exclusive point of attraction
and interest, and beyond the annual address, to at-
tempt nothing in the way of any intellectual exer-
cises, depending on the *Exhibition* alike to illustrate
the present condition of agriculture, and to furnish
sufficient promptings, including the information con-
tained in the reports of committees, for its future
progress and advancement. Now, there are two
objections to this: the one is, that the occasion might
and should be used to obtain and disseminate much
more agricultural knowledge, and the other con-
cerns the permanent prosperity of the society itself,
which is made to depend very much upon the suc-
cess of a show, or a succession of shows or exhibi-
tions.

Where large premiums can be offered, as in the
case of the Royal Agricultural Society of England,
that distribute some \$40,000 annually in prizes, a
vast collection of stock and other objects of inter-
est will be sure to be drawn from a great district of
country round, sustaining year after year the inter-
est of the exhibition and the prosperity of the so-
ciety. The premiums with us are not generally
sufficient to compensate for the trouble and expense
of taking stock to the exhibition. But those who
have good stock and feel an interest in the success

of the society, will furnish their contributions, at
least for a time, but there is danger that these may
become wearied of the repetition or tired of acting
as mere showmen. Such at least has been the ex-
perience and history of many agricultural societies.
There is danger, too, that the interest of the public
might flag, certainly in the contingency of there
being any falling off in the variety and extent of
the contributions by members.

There is another reason why all the interest and
all the labors of the society should not be made to
centre in the mere exhibition. There are many,
probably a majority of those extensively engaged
in agriculture, who, from their position, soil, cli-
mate and staples, are far from feeling an exclusive
interest in fine stock or other articles usually on ex-
hibition. These men, however, are vastly interest-
ed to learn the shortest, cheapest and best way to
bring up a poor farm, or to make still richer a good
one. This is the subject that occupies their atten-
tion at home, from day to day throughout the year,
and that is likely to most interest them anywhere.
It is a task they feel it incumbent on them to do,
and every thought and every energy is directed to
its accomplishment. Now, to show such a man a
fine Durham, or Devon, a Morgan Horse or an Ox-
fordshire sheep, interesting and attractive as these
objects would be to him, it might not, probably, in
his opinion, compensate him for a repetition of an-
nual visits, where a long distance would have to be
travelled and some expense incurred.

While the interest in the show grounds should be
continued, and every possible attraction be added,
cannot these societies, and especially the Maryland
Society, which is in a fair way to become the great
central society for the Middle Atlantic States, ex-
tend the sphere of its usefulness vastly, by varying
its action and exercises so as to include all the
topics—the whole range of agricultural subjects,
practically demonstrating one portion of these on
the show ground, and examining, discussing and in-
vestigating other portions during the evening de-
liberations of the society? No one has a higher
estimate of what has been the success—the unri-
valled success of the Maryland Society, than my-
self—no one more fully and justly appreciates the
energy, tact, talent and address by which its Presi-
dent and a few kindred spirits have carried it tri-
umphantly through its third exhibition, giving it in
this short time a wide spread fame and almost a na-

tional character. It is with real diffidence, therefore, that I submit these views; they may, I fear, seem intrusive, or might to any but a brotherhood of agriculturists, engaged in a common cause, who will discover they are unselfish, well meant, and intended for the common good.

I have long had a high idea of what ought to be accomplished through these associations for the agriculture of the country. This great interest is without any representation anywhere. It is literally disfranchised as to any fostering care by the government, and has not even a concentrated and organized public opinion to represent it. In England, the landed proprietors are identical with the legislators. Now, through these associations, fast extending to every State and every county of the Union, something may be done towards the organization of a public opinion that may cause this great interest of the country to be named somewhere else than in a 4th of July toast, the only place where it has precedence of any other, the least interest in the country.

But my present object is to show the direct advantages that may follow from passing every evening during the days of exhibition in convention, or in deliberations and conversations on agricultural subjects. Might not the matters relating to committees, premiums, &c. that now so exclusively consume the time of the evening meetings, be turned over to an executive committee? Their importance can certainly hardly demand evening after evening, the sole attention of the whole society.

Debate or discussion requires speeches, and these sometimes are "lengthy." Neither would I adopt the form of proceedings of the members of the Massachusetts Legislature in their evening agricultural meetings; nor yet that of the members of the American Institute, both being too much amplified and too prolix where much is to be done in a short time. That I may make myself understood, I will venture to indicate or sketch a conversation that might take place at one of our evening meetings, or rather speak for one of the supposed interlocutors, and who, by the bye, with his intelligence and practical knowledge, could speak or put so much better questions for himself, and I select the topics at random, for there are five hundred subjects that could be named, all equally interesting and important, or much more so.

[By the President]—"Will Gen. Lane, of the valley of Virginia, state the profits of grazing in his section? Where and at what price do you lay in your store cattle? Where seek a market for them? Are the packing and barreling houses increasing on the Atlantic board, and are the exports of beef increasing or falling off?"

"Will Mr. Harvey, of Pennsylvania, state the profits of grazing on the Brandywine? Will it average for the last four or five years \$25 a bullock—that is, keeping the animal a year from the time he is purchased. What do the Chester County graziers seem to think will be the effect of extending the railroads to the grazing districts of the West? Will the Western cattle then be sent over the railroad on the hoof? Can any gentleman present state the rate of tolls established for live stock on the Erie railroad? Are the West likely in future to direct still more attention to grazing and leave us more the supply of the grain markets?"

"Will C. J. Nicholas Goldsborough, of Talbot, state his observation as an experienced wheat grower, of the value of tramping wheat land, or

land intended for wheat, by depasturing it with sheep or cattle? Is it of as much importance with us as it is deemed to be in England, and does it apply to our more aluminous soils? Is it important to keep stock in part with this view? Instead of selling store cattle along the tide water counties of Delaware, Maryland and Virginia, would it not be better, in the present improving state of the land, to graze them for the shambles; that is, those raised on the farm?"

(The same veteran farmer and "old school gentleman," I hardly need say, might be much farther questioned; and every answer would furnish a *safe rule for life* for the young farmer.)

"The President understands that Mr. Jackson, of Delaware, has had much experience and success in growing thorn hedges. Will Mr. Jackson state the variety of thorn he prefers? What is his experience with the osage, and what his mode of preparing the seed and time of planting? Will he state his experience in the use of brick tile, and his mode of laying the tile?"

Answers to these and similar questions (and many more apt and important I am aware might be put) would nightly elicit a rich fund of knowledge—of practical valuable agricultural knowledge—that would be sought and treasured, and the time and money it might cost to be present at these conversations would be regarded as well and profitably spent. Indeed, no practical man could afford to be without this information. There are few that have not doubts about some parts of their own system of culture or practice—these could here be suggested and resolved.

The advantage of this plan of question and answer—and the answer should be pretty direct, at most occupying some five or ten minutes—would be, that practical farmers, men of experience, would consent to take the witness stand, or rise in their places, and answer a few questions, while they would never volunteer to occupy the rostrum for a speech.

Then, again, the President might give the society a treat, by requesting of some guest present, (as Mr. Morris, of New York, who was with us at our late exhibition) to communicate something of what he saw and heard about English or European agriculture—how things went off at the great Exeter Show of the Royal Agricultural Society, where Mr. Morris was present, and was called on as an American agriculturist to address the meeting. Mr. Janvier, too, recently from a similar tour and present at our exhibition could have told us of the wheat fields of Yorkshire and Northamptonshire, and in speaking of the best of our own, in comparison, would have cheered the hearts of our husbandmen and induced them to still dig the marl, spread the lime, and apply the guano. But there was no time for this, and will never be, unless the society, as everybody, can be relieved from giving its nightly attention to all the details of committees, premiums, etc.

The proceedings of each evening's meeting should be published next morning by the daily press. The press would be sure to have their reporters present. In this way, the proceedings of the society would instruct a much larger class of agriculturists. I can confidently say, that in my opinion there is no locality in our whole country from whence more correct, intelligent views could be looked for, so as grain, and particularly as wheat growers, there is no class of farmers that have served a longer ap-

menticeship, or indeed been more exclusively devoted to agricultural pursuits generally.

What we want, then, I repeat, in these societies, is an opportunity to *listen* as well as to *look*. We want the member to briefly tell his experience in cultivation, as well as to show us his success in breeding, for we are generally cultivators rather than breeders. We want the experience and light of the mind, as well as the training and grooming of the hand; we want not merely to witness a spectacle, but time for council and deliberation. We want among such a body of intelligent men, assembled from half a dozen different States, a comparison of views and opinions on the great matter we all have in hand—the improvement of the agriculture of the country. Our task and mission is to advance the agriculture of these old Atlantic States, to revive and improve it, and to do this against the competition of the great West, and we should therefore take counsel and reason together. It is important that we should do so.

The establishment of the society, and getting it under way, where so much had to be done, necessarily has occupied much of the evenings of the society heretofore, but being now fairly under way, I cannot but express the hope, as a humble member, that our next meeting will be distinguished by some interesting *agricultural conversations*. There is, I know, nothing new or novel in the idea of these *conversations*. I believe such was the mode of conducting the proceedings of the old Maryland Agricultural Club, and it is therefore but returning to an old practice. Among the really *intellectual* treats at the last meeting, was the very able and practical Address of the Hon. Willoughby Newton, delivered in good taste and with great effect. A repetition of addresses similar to those with which the society has been heretofore annually favored, and then our *evening talks*, and there will be nothing left to be desired. But all this is submitted with great deference to the better judgment of the society.

There is one other remark I venture to make. In order to our harmonious action, nothing like political topics must be introduced. We all agree here, or should, and I am sure will. A member who would seek to use such an occasion to make political capital, would be justly universally rebuked and condemned.

But, then, do not let us “see the things that are not,” and close our lips and stifle our breath for fear some one will *misconstrue* what we may utter. The atmosphere we breathe should be free, and all should feel at ease while uttering sentiments legitimately and fairly within the objects of the association, and not connected with political questions. I am led to make this remark in this connection. For one, I was very anxious that the society, at its late meeting, should pass resolutions against the passage of the so-called Canadian Reciprocity Bill. We all agreed they would be likely to have some influence at Washington. On conversing with several of our intelligent democratic friends, they highly approved it, and some of them pressed the necessity of its being done, saying it had no more to do with the question of free trade, than a proposition by Cuba to exchange the article of sugar with us would have, and one of these gentlemen consented himself to introduce the resolutions. But some of our friends seemed to think it unnecessary on the ground that there was no danger of the Bill passing—(I hope this confidence is not misplaced.) Others suggested postponing it for the present; but

the fact was, as I believe, that owing to over caution, a sort of fastidious feeling on either side—on one quite as much as on the other—fearing it might be construed to have some connection with politics, nothing was done by an association of gentlemen whose interest was directly attacked, not a voice raised, nor a murmur hisped, though no measure that has been before Congress for the last twenty years, will so directly and injuriously affect the Atlantic wheat States, as the passage of this bill, probably reducing one of our principal staple productions 20 per cent. in value. How different would have been the action of an association of merchants or manufacturers! We must hope for the defeat of this measure, so warmly pressed by the British Minister and the New York merchants. But if it is defeated, we can take no credit for it; it will be done by our Representatives, more true to us than we are to ourselves. I instance this to show what I consider a case of *over-much caution*, a degree of fastidiousness, that if carried to such extremes, may deprive the society of much of its usefulness. But the just medium, when we become better acquainted, and our honest views are better understood, will easily be arrived at. While we agree to sink the politician, we will not, I trust, be without the *esprit de corps* that should unite us as agriculturists.

CHAUNCEY P. HOLCOMB.

New Castle, Del., Dec. 17, 1850.

Improvement of Worn-out Lands,

BY

PLOUGHING IN GREEN CROPS, &c.

By the Editor of the American Farmer.

It must be admitted as an agricultural truth, that soils which may have been long in culture, without having been cultivated in clover, or the grasses, or received periodical dressings of barnyard or other putrescent manure, must necessarily have become deprived of the greater portions of their mould, as every crop which may have been raised upon, and removed therefrom, carried away much of the soluble parts of the animal and vegetable matters which were therein. And as it is, also, an admitted truth, that *mould* is an indispensable ingredient in every productive soil, it stands to reason, that, when in the course of improvident culture, it may have been abstracted, it is essential that it shall be restored, in order that the soil may be reinstated in its former powers of production. The question then, *how this restoration shall be brought about?* is one full of interest to every agriculturist. Those who have ample resources—who have full supplies of animal and vegetable manures—who have the materials on their land to form composts, comprising the elements in question—need look no farther for the means of restoring the needed constituents to their soil. But those who are differently situated—who make but little manure, and are but ill supplied with the raw material for forming composts, must turn their attention to the next best means of placing such matters in the soil as will form mould. What those means are, is the subject of the present paper. We have often advised the growing, and ploughing in, of green crops, and we here repeat that advice;—and we do so, from a belief of its efficacy, in the first place, and the necessity of so doing, in the next. We are among those who believe, that no soil can be truly productive, unless both *organic* and *inorganic* food be present there—

in—we believe, that the air can supply a portion of the *organic* food; but we are firmly convinced, that the great body of such food has to be supplied from the earth when the fruit is forming, and that, if it be not there, the plants grown in it will be but poorly fed. We believe also, that the capacity of the soil to avail itself of the food of the air, depends materially upon the fact of the existence in it of mould—that, in proportion to the quantity of decayed or decaying vegetable and mineral matters which it may contain, so will be its powers of attraction and condensation,—so will be its power to appropriate the fertilizing gases of the air. To be sure, the rain, the hail, and the snow may bring them down, and by the process of percolation, they will find their way into the earth; but if either happens to fall upon a sandy soil, wherein there may be no mould to fix the gases which may have been brought down, those gases will speedily escape, and confer but little benefit on the growing crop, because of the want of power in the soil to retain them. The affinity of clay for such gaseous bodies, would, by the power of retention, inherent in it, chemically, as well as physically, exert a much greater, and more friendly influence, in dispensing such food to the plants growing on it, than would sand, whose affinity is dependent upon the mould it may contain; but even clayey soils need mould nearly as much, ultimately, as do sands, as when the growing crops come to form their fruits, the earth is, to a very great extent, the source whence the substances for the formation of such fruits have to be derived.

The next question to be considered, is,—What plants shall be cultivated and ploughed in? This question is to be solved by circumstances. The facility by which seed can be obtained—the facility with which the plants to be selected can be grown on poor land—and the construction of their leaves,—whether they be such as to enable them to derive considerable portions of their food from the atmosphere. This latter consideration is highly important, as all that they derive from that source, will be so much to be added to the fertility of the soil, when the crop comes to be ploughed in.

In England, and other European countries, there are various plants grown for this purpose—the Red clover, as with us; but then, this plant, without manure and lime, will not grow and form such a sod as to make it an object with American farmers to turn it in. Indeed, any soil that will grow a good crop of Red Clover, in our opinion, does not need such extra attention. *Lupine, Rape, Rye, Sainfoin, Spurry, and Buckwheat*, are all grown in Europe for being ploughed in—the turnip is also used for the same purpose. In view of all the circumstances which should operate to determine opinion, as to which are the best plants to be cultivated in our country, as crops to be ploughed in as improvers of poor land, after much reflection, we have arrived at the conclusion that *Buckwheat, Peas, and Beans*, are the only plants about which any serious ideas should be entertained. They all bear many branches, much and luxuriant foliage, and possess a series and formation of leaves, which eminently qualify them to absorb, feed upon, and assimilate in their structures, the fertilizing gases of the air; and hence, when turned under, will not only restore to the earth, all that they may have gained from it, but much more, which they had abstracted from the atmosphere—they will all grow upon comparatively poor

land,—and when a little assisted, will grow in luxuriance. For these reasons we believe them best adapted to American culture, for the proposed object.

Let us now consider how they may be best managed, at the least expense, so as to produce the greatest benefit. In expressing our opinion in this particular, we do not wish what we may say, to be received as oracular, but merely in the light of an *opinion*, which we believe to have been well considered, honestly formed, and maturely reflected upon.

We would plough in two crops, in a season, which we would manage thus:

We would plough the ground 6 inches deep, harrow well—harrow until we had brought the soil to very fine tilth—we would then broadcast on each acre, 10 bushels of *lime*, 1 bushel of *plaster*, 10 bushels of *ashes*, unleached the best, and 2 bushels of *salt*, then sow 1 bushel of *Buckwheat*, harrow the whole in together, and roll.

When the *Buckwheat* first came into bloom, we would roll, and plough it in 8 inches deep, then run the roller lengthwise the furrows, and harrow. In 5 or 6 days after this, we would sow broadcast over the field, at the rate of 15 bushels of *lime*, or *ashes*, per acre, sow thereon 2 bushels of "*Cow*," "*Finney*," *Black-eye*, or any other *pea*, and roll. When the *peas* came into flower, we would roll them, then plough them in 8 inches deep, roll lengthwise the furrow, and harrow.

We would leave the field thus until it was time to seed it in wheat; when we would give it a harrowing, to destroy weeds, and freshen up the soil; then sow 4 bushels of *bones*, and 4 bushels of *ashes*, and 2 bushels of *salt*; then seed it with wheat, at the rate of 2 bushels to the acre, and harrow the whole in together, and roll.

With this preparation and management, we believe, that even worn-out land may be made to bring a good crop of wheat, and bear being seeded in clover, which we would seed on it the next spring. We do not pretend to say, that it would grow as large a crop as it would had it been manured with a *heavy dressing of Guano*, but we do affirm, that the improvement would be more durable, and the soil placed in a condition better adapted to its permanent melioration.

After the clover had stood two years, we would plough it under, and give the land a dressing of 50 bushels of *lime*, or 50 bushels of *ashes*, or 100 bushels of *marl*, per acre, and calculate, by means of a proper rotation of crops, and periodical manuring, to keep it up to a profitable and advancing state of production.

In regard to the *compost of bones, ashes and salt*, before we sowed it, we would treat the substances thus: We would intimately mix them together, throw them up into a heap, where we would let them remain for a few days, and until fermentation had commenced, which is easily ascertained by inserting a stick into the mass. In withdrawing the stick, if it felt hot, that fact should be received as evidence that the fermentation had gone far enough. If this point was reached before we were ready to sow, we would shovel the mass over, and add 1 bushel of plaster for every 10 of the compound. With such treatment, we feel certain that a very high state of fertility may be imparted to almost any soil, and we are sure that the expense should not be complained of, when a good crop of wheat, and two luxuriant crops of clover, could be thereby

grown in three years, and the land made fertile in the same time.

LET THOSE WHO DOUBT, TRY THE EXPERIMENT.

If it be objected to this system of improvement, that one year will be lost to culture, our answer is ready. To cultivate such lands as we propose to improve, can only result in loss and disappointment, as they do not possess the inherent properties necessary to ensure the growth of a profitable crop; while one acre improved by our process, will yield four times as much as it would have done before, so that, in fact, so far as products are concerned,—so far as quantities are involved,—there will be an actual gain the year succeeding improvement, of more than three-fold, calculating nothing for the year devoted to the renovation of the land. Besides which, the soil will have been so far restored to fertility, as that, by subsequently adopting a judicious rotation of crops, and care in manuring, it may be retained in good heart for any length of time, provided clover, or grass, be adopted as one of the crops in the system of rotation.

This question here presents itself: Is it not better—infinity better—to omit a crop for one season, with the sure prospect of permanent melioration, than to continue the culture of the field with the certainty of loss? The answer to this question needs not being stated by us, as the good sense of all intelligent agriculturists will prompt them to give an affirmative response.

ESSAYS

ON

Various Subjects of Practical Farming.

BY EDMUND RUFFIN, OF VA.

ON CLOVER CULTURE, AND THE USE AND VALUE OF THE PRODUCTS.

Clover is now generally and properly considered as one of the valuable field crops of many farmers. It is generally understood that the improvement of land and of grain crops, as well as other important profits, would be very imperfectly pursued, without the aid of clover culture. Yet the power of land in lower Virginia to produce red clover to advantage, in field culture, has been out a recent creation and discovery. Thirty years ago, the production of clover in this region was confined to a few farms of the best natural soils, and on them, to small and very fertile spaces. A few acres of clover, to supply early green food, and rarely some bad hay, was the most that was obtained anywhere, except on soils of the highest natural fertility, on which only gypsum would act. If elsewhere sown over a whole field, (on the young wheat,) as many persons did, perhaps once or twice only, the growth was generally so small, sparse and feeble, and so soon was it killed by stronger natural weeds, that such efforts were almost always unprofitable; and the general production of clover, as part of a regular rotation of crops, was soon deemed hopeless.

My own early attempts to grow clover were continued for some years, and extended over all except the very poor land of my farm. But few plants lived through a year, and fewer attained more than dwarfish size. And the only small exceptions of comparative good success, were on highly enriched lots, which, besides other manuring

ingredients, certainly possessed (like all other best soils,) much more lime than the ordinary proportion in our lands. It was after having abandoned as hopeless all attempts for extended clover culture, that I began to make my fields calcareous by the use of marl. And when the marled land had produced its first crop of wheat, and was left to rest under its after growth of natural weeds, clover of vigorous growth and good size showed sparsely the next year, and in some places stood thick enough to be mown for hay—the first such product I had ever obtained. This new and then unexpected and remarkable growth, sprang either from dormant seeds of the ineffectual early sowing—or otherwise from the seeds produced on the few plants which grew; and when were so diminutive, and so soon dead, as not to have attracted my notice, as exceptions to the supposed general and speedy failure. The observation of the later results, after marling, served to indicate the true cause of the previous and general failures of clover culture, and the means by which that culture could be made productive.

The sowing clover seed throughout my fields was then resumed, and the results, after marling, were as generally successful, as before they had been the reverse. The before generally and well understood fact that clover could not be raised to any profit in lower Virginia, had been ascribed to the heat and severe droughts of the summer months, and to the general excess of sand in the soil.—These certainly are strong obstacles, which now, as then, still oppose general success. But it is now clear that the former general and insuperable obstacle was the almost universal and great deficiency of lime in the land. Wherever that defect has since been removed, by sufficient liming or marling, it is found that clover will grow well, if under other favorable circumstances of soil and season. We still frequently fail in the crop, because of too sandy soil and dry seasons. But though a precarious product, the growth is naturalized on every soil made calcareous; and the crop, if scanty, on poor lands, is yet hardy and tenacious of life, as if indigenous. Further—in many, if not most cases, after full marling or liming, our soils which before had been incapable of receiving any benefit from gypsum, then become susceptible of this mysterious and important influence, and by which the product of clover is so greatly increased.

In seeding clover, it is necessary to choose a time, and state of circumstances, when its young and feeble growth will be the least obstructed by other and more vigorous plants. The usual and best condition of land is when it has been sown in wheat (or oats) following either corn, or some other cleansing crop. The young wheat then has almost exclusive possession of the land; and the young clover, sown in winter or early spring, is rather protected than injured by the over-shading wheat. When, however, the land is very rich, and the wheat very rank in growth, its too dense shade is apt to smother and entirely destroy the young clover, as all other young plants.

Clover seed may be sown on the first or any later snow. But I prefer a time and condition of things which usually occurs some time in February or early in March. This is when, after the ground has been frozen, it thaws and dries, and by its contraction, opens in numerous little superficial fissures, or cracks. Then the sowing should be pushed on as rapidly as possible, as the first rain will

destroy this favorable state of the soil. If the seed is then sown, a large proportion will fall into the cracks, and be covered by the first expansion of the soil. The safety of the young sprouts, from frosts and from drying winds and sun, is thus much better secured, than when the seeds are left (as usual) lying on the surface of the earth. But it is still better for securing a good "stand," and the living of the young clover, that the ground shall be lightly harrowed before the sowing of the seed, and still better if it is rolled immediately after. But it is not often that much of a wheat field, in February, or even in March, is dry enough for safe harrowing or rolling—even if there is spare force and time for either or both of these operations.

The sowing of clover seed over all the land required is a tedious business, if to be executed, as usual, by casting the seed, and by good sowers only. There is not always to be found even one such competent sower on a farm—and very rarely three or four. Moreover, great irregularities and defects in the sowing of clover seed cannot be known until after the plants are well up, and when too late to alter any wrong procedure, or supply deficiencies. Again—every high wind obstructs and suspends the sowing; and in March, there are but few days in which the wind is not too strong. Thus, the whole available season is scarcely long enough for getting the seed on the land in the ordinary modes of sowing; and, as such slow work, by a small force, at different and uncertain times, cannot possibly have proper supervision, it will certainly be done both worse and more slowly than necessary. Of course, under such circumstances, there can be no waiting for the proper and best condition of the ground for receiving the seed, of which there is not often more than a few days' continuance, before rain comes to fill the cracks, and settle the loose surface.

The mode which I have long pursued, and by which most of the usual difficulties are avoided, will now be described. Each sower is provided with an apron, to hold the seed, one end of which is tied around his neck, or waist, as found most convenient. The other end of the cloth is gathered up and held by the left hand, at suitable height. The same hand also holds the handle of a light paddle, of which the broad part may be about 7 inches wide, and 8 or 9 long. The heading of old flour barrels, or broad shingles, offer suitable materials for these paddles. The sower holds the paddle in front of his breast, sloping outward, and the upper end higher than the handle. With the right hand he takes up as much seed as can be held in the closed tips of the thumb and two fingers, without over-running, and throws the seeds with some force against the paddle. Trial will soon direct the proper slope or angle at which it is best to hold the board; and when so held, the rebounding seeds will scatter very equally right and left and in front of the sower. As walking along the row, he dips up the seeds as one step is made, and throws them with the next one. If the board is only held in a proper and uniform position, and the seeds taken up as directed, and thrown with sufficient force, any totally inexperienced laborer can sow well, and indeed cannot avoid distributing the seeds equally. I usually employ in sowing every hand not required for other service, including women and young ones. All who are able to walk with the best hands, keep in one party, and sow walking abreast, or side by side, along the rows. If there are young or less able hands, who could not keep up with the others,

they may be kept in a separate gang, with one careful old hand to watch and direct them.

To regulate the quantity of seed, according to the land and its condition, a certain number of sowers are required to sow a marked width. If the wheat field is in ridges or beds, whether broad or narrow, each sower may carry about 5 or 5½ feet of width. One or the other of these widths is usual for corn-rows—and either the same, or some multiple of the width, is made a bed for wheat. My own beds are mostly either of 25 or 27½ feet width. To seed such, about 5 sowers walk abreast on each bed. Men and women or smaller hands are placed alternately, so that their different quantities of seed may be averaged and equalized. As the seeds thrown by each sower scatter over a width of 7 to 10 feet, of course each row of seedling laps well on the two nearest rows. In this way, I think 3 quarts of seed enough to the acre, in ordinary cases, and serving to give a better and more equal seeding than 4 quarts sown in the usual manner of casting. And if the seeds sprout and live well, 3 quarts will be an abundant supply. For the general deficiencies of clover plants, at later time, is not so much for want of seeds, as because of their failure to sprout, or the plants being afterwards killed by freezing or drought.

In this mode, the whole seeding may be finished in two or three days, at most, and be properly superintended. The overseer, walking at one end of the row of sowers, and looking along their line of boards, can readily see any important defect of careless hands. Having in view this rapid operation, there is no need of hurrying the commencement, or sowing when the land is not in good condition, for fear of being too late. The proper loose and cracked condition of the wheat field will be sure to occur some time late in February or in March. Then sow as quickly as possible, for fear of rain occurring to destroy this most favorable condition. If nothing is done to cover the seeds, it will be done tolerably well by the rains alone, on a surface so fissured and open. But it will be much better, and go as far as is possible to insure success, if the land can be lightly harrowed before seeding, and rolled afterwards. A wooden roller, set thickly with pegs, and not too heavy for its object, will serve much better than a smooth roller for this purpose. When there is no time for either of these slower operations, bush-harrowing, on dry and light soil, will be the next best mode of covering. By tying enough of any thick branching rigid boughs, (as hawthorn, willow-oak, &c.) along a pole, a rough broom may be made which will sweep and lightly scratch a breadth of 18 or 20 feet—and yet be light enough to be drawn by one mule.

So far as time and force will allow, rolling the land after sowing is preferable to the bush-harrowing. Rolling not only covers the seeds, but by compressing the loose surface soil, is a benefit to the growth of both the wheat and the clover.

Still better will it be, if light harrows can precede the sowing and rolling. I have used for this purpose square harrows, with 20 or 25 straight teeth (or "tines") sweeping 5 feet, and light enough to be drawn by one horse or mule. But having none of this kind recently, I have used like harrows, too heavy for one mule, but a very light draught for two. The points of the teeth should be somewhat worn by previous use. I have not found the running of such harrows materially injurious to wheat on dry land, by tearing up the

plants; and when followed quickly by the roller, it can scarcely be otherwise than beneficial.

If the clover seeds are sown ahead of the harrow, they slide off of all the little eminences, and are collected in the hollows. This is one of the usual and general and worst causes of unequal distribution and waste of seed. The light harrow, if following this seeding, will scratch through the eminences, where there are no seeds, and seldom touch the depressions, where most of the seeds are clustered. But when the harrowing precedes, the seeds are stopped by and in the scratches, and are as apt to remain on the higher as the lower spots. The subsequent settling of the loosened earth covers nearly all the seeds, even without rolling. But rolling in addition, wherever it can be done, adds greatly to the perfection of the whole operation.

There is another advantage in the seeding being after instead of before the harrow, if on flush ploughed land. Each row of the harrow may leave a very narrow, but perceptible interval between it and the preceding row. Six or ten inches width thus omitted will be no objection. Then every row may be easily distinguished, and will serve as rows for the sowers to walk on. This is an important aid, when there is no bedding to furnish marks for the sowing.

After the wheat crop has been removed from the field, it is advisable to bring on cattle and other live-stock, not only to eat the remaining wheat, but also for the benefit of the young clover. The land is then too open and puffy to suit clover, which demands a close compact soil. The trampling of animals is in this respect beneficial—and much more so than enough to counterbalance the injury to the clover which their grazing must cause, if considered alone. Still, the grazing should be as little as will give sufficient trampling—and the access of stock should not be permitted when the ground is wet.

Perhaps a further benefit from cattle being on young clover, is caused by their treading down the weeds, and preventing so much shading of the clover. Too much shade to clover in summer is very injurious. I have seen it killed entirely, in spots, by a covering of straw applied after harvest, and so light, that the straw was held up off the ground by weeds. Also I have heard from Gen. Corbin Braxton, that he has maintained a manifest better stand and growth of clover by mowing the growth of weeds, (mostly carrot weed, or "rag weed,") which always succeeds our wheat, and soon overtops the young clover. The removal of the shade must be the cause of the undoubted benefit to the clover.

The most economical and profitable application of putrescent manures (of stables and stock pens,) is to clover, in March and April, in the year succeeding that of the seeding. But as that mode of applying manure has been before treated of, in a distinct article,* but a few words will here be added on that head. All spots of clover thickly standing on poor ground, and where but a mean crop may be expected, should certainly be top-dressed in the manner referred to. Thus, with favorable season, a mean and almost worthless growth may be made heavy enough to be a good green manuring for the next succeeding grain crop. When good land and clover are so top-dressed, the subsequent mowing of the crop is not prevented, nor much im-

peded, by the manure having been applied. Indeed, in the 2 or 3 months following the application, the manure will have been mostly converted to clover, and the remnant of undecomposed manure will lie so close to the ground as to be but little in the way of the scythe. It is proper however to leave the stubble higher where manure had been applied.

Many farmers, who properly deem their clover a manure crop, object to mowing and removing any portion of it, as being an improper abstraction of fertility from the land. So different are my views, that I would wish every acre of clover to be mowed once, if time and force permit, and if the product would pay for the labor.

Clover, in common with all other plants of the leguminous or pod-bearing family, draws less support from the soil, and more from the atmosphere, in proportion to the feeding or manuring value of the product, than any other family of plants. The peculiar value of clover as a manuring crop has long been known, and made use of in practice. The like value of the native pea (or more correctly bean) of the southern States is scarcely less than of clover. Such have been the inferences of practical farmers, from experienced effects only. But scientific investigations have more lately thrown light on the subject. In this article, designed exclusively for practical application, it would be improper to make more than slight reference to these very interesting scientific researches. It has been found that in clover stems, leaves and roots, and in the stems and leaves of peas and beans, and more especially their seeds, there is more azote than in other plants. Further—Boussingault, (the practical farmer as well as profound chemist, and whose authority deserves the highest respect,) found that plants of the leguminous tribe, red clover and peas, absorbed azote from the atmosphere, and which could not be done by plants of the cereal or grain-bearing tribe. Azote, though much the smallest ingredient of the elements of organic matter, is incomparably the richest; and its presence and quantity constitute the greatest alimentary value of plants, for food or for manure. The cereal plants can obtain their necessary supply of azote from the soil only. The leguminous plants can as well profit by all the azote supplied by the soil and in organic manures, but also can draw this richest aliment from the atmosphere, where the quantity is unlimited, and the supply only limited by the power of plants to absorb and use it in this separate and pure form.

It has further been understood by scientific investigators that plants in general take up but little nutriment from the soil before they form their seeds. Previous to that time, water and the atmosphere have mainly supplied the nutriment necessary for their growth. Upon these grounds, if clover is mown for green food or hay (for consumption on the farm,) before the seeds are fully formed, there has been but little abstracted from the soil; and the use of the removed clover as both food and material for manure, must be of more value than as manure only, if left standing on the land. If the mowing is later, for hay, and when some few of the seeds are matured, though more will then have been abstracted from the soil, still the product remains to the farm. The earliest profit, from the food, goes to the farmer, in the labor or the fattening of animals. The manure so produced, though less in quantity and value than if the clover had

*Republished in American Farmer, vol. 5, p. 70.

been left to die and fall on the field, is not as much lessened, as the amount of the other important values derived from the mown clover.

But there are other important advantages of mowing the first growth of clover. It is ready for the scythe, for green food, in May, and fit for hay early in June. During that time, all the weeds which damage the wheat crop by the admixture of seeds, are then in growth, too far advanced to again produce seeds, and then too green for their seeds to germinate. The clover field is more or less set with these weeds—cockle, dandel, (or "spelt") cheat, and wild garlic—and sometimes rye and oats, if these crops were grown on the farm—the seeds of all which had been left on the ground when last under wheat. All these annuals are effectually destroyed by mowing the land for clover. Even the wild garlic, though the root is not hurt, has its abundant seeds above ground destroyed, and, for that year, its injurious effects much limited. Further—by removing the first growth of clover before its seeding, the second crop springs quicker and grows better. If designed to supply seed, the product is made better, and more easy to harvest. If to be ploughed under in August or September, to prepare for wheat, the ploughing will be much easier and more effectual, than if the dead first growth had remained. *(To be concluded.)*

WORK FOR THE MONTH.

FEBRUARY.

In a few more weeks farmers and planters will be called to the discharge of those duties which are to lay the ground-work of their spring crops, and, therefore, we would implore them, as they hope for success, to do whatever they undertake well; and whatever else they may do, *not to pitch their crops too large.*

The desire of having the reputation of owning the largest corn-field, has caused many to have the least producing one. Among all the voracious crops, there is not one that requires more food than does that of the corn plant. It must have food, good nutrient food, and plenty of it, or it cannot prosper to the extent of its capacity for production. Give it plenty to eat, no matter howsoever coarse,—give it good culture,—and it will repay the cultivator with a full and overflowing measure of reward. Stint it in nutriment, and it is sure to punish the grudging hand by which its food was doled out. It requires, too, a deep pulverized bed to luxuriate in; for from its natural propensity to send its tap-roots deep into the bowels of the earth, and to stretch its lateral ones far in the surrounding earth, unless it finds plenty of room, it cannot develop its vast powers of reproduction.

We throw out these suggestions, in anticipation of the time of action, in the hope that they will be improved upon,—and shall now direct attention to such things as claim immediate action

ON THE FARM.

Stock of Manure.—As manure is to the farmer, what blood is to the human system, the source of life, we admonish all to exert themselves to accumulate all they possibly can, and when accumulated, to preserve it. Few ever think how great a loss they sustain, by permitting their manure to lie exposed to the sun, the winds, and the rains, and as few reflect, that ten loads of manure well taken care of, are intrinsically worth more, and will go

farther, than twenty kept without regard to the preservation of its volatile or more enriching parts. Many a farmer, through the want of a little care, suffers his dung pile to become exhausted of most of its principles of volatility, long before he hauls it out to his grounds for use; and, then, perchance, blames his land for a fault that should attach to himself. Every body of manure should be covered; but this, when the price of labor is considered, is, possibly, more than can be expected in our country; therefore, for the present, all that can be expected, is, that the cattle-yards should be sufficiently dished in form, as to prevent the riches of the manure from running away; that each yard be provided with a large body of vegetable matter and earth, to absorb the liquid voidings of the stock, and that plaster, or charcoal, be, every few days, strewn over the yard to fix the volatile gases.

These are requirements so obviously proper, and call for so little exertion, or expense, that we think they will not be objected to: certain are we that they ought not to be.

There is one suggestion that we desire to make, in advance of the time of carrying it into effect. It is this:—We believe, that in every farmer's family, there are enough suds, dishwater, urine, and offals made, to render, for each member of such family, five loads of earth good manure, in the course of a season. It should, then, be an object with every one to have a heap of earth hauled near to his barn, on which should be placed and poured, all such materials, as they are made, which should be covered with earth, and that sprinkled over with plaster. If treated thus, no offensive smell would ensue. So that, without the least discomfort, a very large body of manure could be accumulated in the course of the season, in addition to that usually made in the cattle-yards, and equally good in quality.

The materials for the formation of such compost heaps can be found in the marshes, in the woods, in head-lands, on the shores, and various other places, which will present themselves to a discriminating mind; the more vegetable matter they may contain, the better will they answer the purpose.

We conclude this branch of our remarks, by affirming,—that the making and preservation of manure heaps, should be the first object, the first duty, of every farmer.

Bones.—Save all the bones made on your farm.—In every ten bushels, there are much nutriment, and enough phosphate of lime to supply an acre of ground.

Ashes.—Take especial pains to save all your ashes; keep them under cover, and preserve them from deterioration: they contain all the inorganic matters necessary for your crops.

Dead Animals.—If it should be your misfortune to have a horse, a cow, an ox, or other animals to die on your hands, don't haul them out to poison the air with their noisome effluvia. On the contrary, utilize them. If a horse, cow, or ox, should die, have it skinned, sell the skin, cut up the carcass into small pieces, and form it into compost with peat, marsh or river mud or muck, mould from the woods, or some other earthy and vegetable matter. A dead horse, cow, or ox, thus treated, will make twenty loads of good manure: a dead hog of 200 lbs. weight, will make 2 such loads, a dead sheep will make one, and to come down to small things, which should never be overlooked, a fowl would make a wheel-barrow load. All such

composts, when being made, should, as each layer is formed, have charcoal, or plaster, freely strewn over them.

Now, is it not infinitely better to thus convert a horse, cow, or ox, into 20 bushels of wheat, 50 bushels of corn, 30 bushels of barley, 20 bushels of rye, or 40 bushels of oats, than to fill the air with the intolerable stench which emanate from dead bodies while undergoing decomposition? Economy, your own interest, health, and cleanliness, answer, yes!

The following analyses by Drs. *Sherer* and *James, of Geissen*, show how rich animal flesh is in the elements of fertility. It consists in each hundred pounds, of

Carbon,	54.56
Nitrogen,	15.72
Hydrogen,	6.90
Oxygen,	
Phosphorus,	22.83
Sulphur,	

100.

When the flesh is decayed from off the bones, break the latter up into small pieces, mix with every bushel of them, 2 bushels of ashes, and one bushel of salt, let them remain 10 days in pie, then break the pie down, and mix 1 bushel of plaster therewith, and you will have as much good manure, as will make an acre of land pass through a four or five years rotation; so that a dead horse, cow, or ox, may be made to manure 2 acres of land well—so as to bring its 20 or 25 bushels of wheat, or twice these quantities of corn, and so in proportion of other grain.

Management of pastures.—If you are so fortunate as to have a permanent pasture for your stock, you may greatly improve it, by sowing thereon a mixture comprised of 2 bushels of bones, 5 bushels of ashes, 1 bushel of salt, and 1 bushel of plaster, per acre, seizing as the time for application, some of those periods, which often occur at this season, when the ground is too firm to be poached by horses. After sowing the mixture, roll the ground. If you were previously to harrow it, it would be all the better. 50 bushels of marl, or 25 bushels of lime, per acre, would be a good substitute for the above mixture.

If you have no pasture, but have an old field that you can spare to form into one, you may make one out of it, without breaking it up, in the following manner: harrow the ground with a heavy harrow several times, say twice each way; then prepare a mixture of 10 bushels of ashes, and 5 bushels of bone-dust, per acre, and sow thereon, harrow the mixture in, then sow the mixture of seeds recommended in our August No., and roll them in, and you will lay the groundwork of a permanent pasture. The old field should not be grazed the first season. It will be well to sow 50 bushels of lime thereon, per acre, next winter, and if you top-dress and sow grass seeds every few years thereafter, you may assure yourself of having a luxuriant pasture for thirty or forty years.

Out-buildings.—If any repairs be wanting, have them forthwith attended to. It is a trite, but true saying, that "a stitch in time saves nine."

The repairs being made, give them a thorough cleansing and white-washing. Besides the beneficial influence which such purifications exercise upon health, attention to such matters serves to increase the good opinion and respect of one's neigh-

bors; for however opposite they may be in these respects, themselves, they always admire it in their neighbor. And then, the stranger, as he rides by your gate, will instinctively exclaim,—"There lives a notable, thriving, and industrious farmer: See how neat every thing looks about his premises!" And again, one really loves his home the better, for every well designed improvement which he may put upon it.

Fencing.—If you have not enough already done, push ahead, and have all the fencing you may need felled, as, after this month, it may prove too late.

Bushes, &c.—If you have permitted the sides of your fences to grow up in bushes, briars, and brambles, have your briar-hooks lustily plied with stalwart arms, until there is not a vestige of one left along the whole line of your fences. Such incumbrances are not only unsightly, but subject you to the censorious spirit of the way-farer as he passes by your premises; they rob your soil of its fertility, and, by their shade, rot your fences.

Sowing Clover seed.—Sow clover seed on your wheat fields, at the rate of 12 lbs. per acre. It is a good plan to sow it on the snow. If not sown this month, we would wait until the frost is out of the ground, when we would sow the seed, lightly harrow, and roll it in. The harrowing will effectually bury the seed, while the harrowing and rolling, will, jointly, benefit the wheat; the first, by acting as a cultivation to the wheat plants, will destroy weeds, while the latter will restore any plants thrown out, consolidate the earth, and otherwise benefit the crop of wheat.

And we are free to affirm, that we would never sow clover upon a wheat-field, without sowing orchard grass seed also,—that, upon every acre of such field, we would sow 12 lbs. of clover seed, and 1 bushel of orchard grass seed—sowing the clover seed first, by itself, and the orchard grass seed, in the opposite direction, by itself: that when we combined these seeds together, we would delay sowing them until such time in the spring as the soil was sufficiently sound to prevent the poaching of the horses' feet, and that, in putting in the seed, we would harrow the ground with a light harrow, and finish the operation by rolling. Clover and orchard grass, mixed together, make a much better hay, than clover does alone,—produces more, the after math is much greater, and so also is the autumn pasture much more luxuriant and enduring. It is objected to orchard grass, that it is a coarse grass; but it is not so, unless it be suffered to go to seed, which no grass ought. If cut when it and the clover first comes into bloom—and they should be—it is not coarse—the hay is more safely cured, than when clover alone is grown—and the pasture is exempt from all danger of hoveing the cattle, to which clover is liable. Besides, the orchard grass will protect the clover after the wheat shall have been cut.

Winter ploughing.—Stiff clays should be winter ploughed.

Sandy lands with clayey sub-soils.—It frequently happens, that poor hungry light sands, rest upon what is termed, in provincial parlance, "poison" clays—or in other words, the sub-soil is of hard tenacious clays, while the surface soil is almost a blowing sand. Now, it is an easy matter to convert such lands into good loams, by simply going a couple of inches deeper, and turning up so much of the substratum. This should always be done in winter, and when done, should be followed by a

dressing of lime, or marl, 25 bushels of the former, or 50 bushels of the latter, per acre, will be enough for a first dressing. In spring, such lands should be harrowed, cross-ploughed, harrowed again, and then ploughed the way they were first ploughed, and harrowed,—previous to the last ploughing, they should be manured. By such treatment, their powers of attraction and absorption are vastly increased, and those of retention as largely enhanced. The physical change becomes so manifest, and their productive capacity so increased, that their intrinsic value may be said to be doubled. This is not mere theory,—we have known it to be done with the happiest results.

Tobacco Beds.—Attend to the preparation of these. For the method, we refer you to the admirable essays of Col. W. W. Bowie, and others, to be found in our last volume, pages 184, 219, 266.

Sowing Yellow locust seed.—As timber for posts are becoming scarce, it may be well to sow a few quarts of *Locust* seed, to raise plants for the formation of a grove. It will not be time for some weeks to sow the seed, and we anticipate it, to enable our readers to make the necessary preparations. The ground to be selected should be a deep well exposed loam; it should be manured, ploughed deep, harrowed, and the seed sown *thinly*, in drills 2 inches deep, 4 feet apart. Before being sown, the seed should be soaked in *hot water* for 24 hours; all the seed which float to be cast aside. The plants when they come up must be kept clean. At 1 and 2 years old the young trees will be fit to be transplanted. They should then be set out in a deep, warm, soil, which has been well manured, ploughed, and harrowed, in rows 12 ft. apart, 10 ft. asunder in the row, which will give to each acre, 363 trees. In twelve years they will be large enough for posts,—and we all know they make durable ones. A grove once set, will, after being cut down, renew itself, and furnish a new supply of post timber every 12 or 15 years.

We have stated, that these trees might be cut over every 12 or 15 years for purposes of fencing, and we will add, that such of those as remained from 20 to 25 years, if fair, vigorously grown, healthy trees, would be worth *three* dollars a piece for ship-building; would at all times command ready sale to Ship-wrights, as also with Rail Road companies for use on the tracks. What an acre of land would bring for such purposes, if sold, can easily be calculated. As a matter of convenience and profit, it is with the owners of land to determine, whether their interest would be subserved by setting out a grove of a few acres in extent; the number of course to be determined by the size of their respective farms. But it appears to us, that those who have old fields doing nothing, could not do better than to appropriate a portion of them to such culture, as, after being removed from the nursery, and planted out, they would cost nothing but the rent of the land, except for a small dressing of lime or marl.

Liming and Marling.—The occasion of preparing the land for corn will present a fine opportunity of applying lime or marl to any that require it.

Orchards.—We can but renew our remarks in our former numbers, upon the management of the orchard.

Poultry, of all kinds should be well fed, their food alternated, occasionally, receive fresh water, and have gravel, sand, and lime, always accessible

Gates.—Let every field on your farm be provided with a good gate.

Wagons, Carts, Implements, Tools.—Examine, and have such as need it repaired.

Gearing.—These, if oiled once a month, will last much longer than without this care.

Store Hogs.—Let these receive their food regularly three times a day, be regularly watered, have charcoal, rotten wood, and ashes, always accessible to them, be provided with warm, dry, well littered lodgings, and plenty of raw materials to work up into manure.

Breeding Sows.—Each breeding sow should have a separate pen to herself, and be treated as the store-hogs, otherwise.

Working Animals.—Treat these as we advised last month.

Salting of Stock, generally.—All the animals should, thrice a week, receive allowances of a mixture composed of equal parts of salt, ashes, and lime. When to be had, oyster shell lime will be found best for this purpose, owing to its containing phosphate of lime.

Milch Cows.—This month and next are particularly severe upon stock, and as your milch cows have to rely upon what you may give them to eat, let your allowance at this season be liberal; humanity requires that it should be; so does your interest. Unless you furnish them with the substance to form it out of, their contributions to the pail must be limited; for although straw alone will preserve them from positive starvation, it has not that in it to encourage the secretion of milk. Therefore, if you desire to have a full supply of this delicious beverage, of cream, and of butter, you must give your cows good hay and plentiful menses of succulent food. Warm stabling, well littered stalls, and daily cleanings of their hides, are great promoters of milk secretions.

Young Stock, of all kinds should be so fed as to keep up their condition to that point of healthfulness and vigor, in which the secretions for flesh, bone, and fat, are ensured in a state alike undisturbed and continuous. Without this be the case, their size will be curtailed. Good hay, and moderate allowances of grain, should be daily fed out to them, with occasional menses of roots: all animals from man, downwards, delight in a change of food. What they receive should be regularly given them at stated hours of the day, which should always be accompanied by a drink of good pure water, to aid their digestive powers. The better you feed them, the larger will they grow, the more and better dung will they make; so that your profit depends upon the liberality of your treatment.

In-calf heifers, and cows, should receive good hay thrice a day, and menses with meal in it at least once a day; they should have warm, clean bedding, at night, and comfortable quarters through the day; a good warm yard to exercise in at pleasure, and a stable or shed to protect them from the weather at all times. If you desire to raise a good breed of cattle, and to preserve those which are so in their good qualities, you must feed them well; bone, muscle, fat, and the secreting organs, demand to be kept always in healthful action, and these things cannot be done upon any system which merely keeps the skin and bones together. Four cows well kept, and well cared for, will contribute more to the comforts of a family than a dozen which may be so fed as merely to preserve

provi-
amine,
ill last
regu-
have
cessi-
ill lit-
als to

have
as the
divised

imals
of a
s, and
ill be
aining

rticu-
cows
o eat,
; hu-
in-
sub-
o the
alone
t has
milk.
ly of
atter,
tiful
well
ides,

as to
hful-
dash,
ndis-
case,
mod-
out
ani-
ge of
giv-
ould
pure
etter
more
your
reat-

hay
east
ing,
the
ure,
the
good
e so
ell;
de-
and
tem-
her.
con-
n a
rye

life. Cold and hunger, destroy the physical powers of man or beast.

Stiff Corn lands.—Should the weather permit, it would be a good policy, and a saving of time, to have such lands manured and ploughed up, to be acted upon by the frost. When the time comes for planting, sow a bushel or two of salt per acre, and thoroughly pulverize, by harrowing and rolling. The salt will exert a double influence, it will fix the ammonia, and kill the grubs and cut worms.

Oats.—It is early as yet to get this crop in; but as our paper circulates through such a wide range of latitude, it will be time in the South to do so before our next issue; we therefore, desire to impress this truth upon our agricultural friends:—*A good crop of oats cannot be grown upon poor land without manure.* We thus early apprise them, because the oats crop may be made a profitable one, if it be given a chance. Crops ranging from 40 to 100 bushels per acre, have been frequently grown, we have known a field of 40 acres, to average 60 bushels to the acre, and yet, from what we have seen, the average of the whole country does not, we fear, reach 10 bushels. Why is this so? It is simply, because oats are most generally grown on soils wherein they can find little or nothing to eat. Those who wish to grow a *paying* crop of oats, must either grow them on land naturally good, or made so by manuring.

With plenty of *Guano*, say from 200 to 400 lbs. to the acre, the poorest land might be made to produce a good crop of oats; but then as the supply of this manure is very limited, and not procurable by farmers remote from the coast, we will give the following formulas:

2. Ten bushels of bone-dust, 10 bushels of ashes, and 1 bushel of plaster, per acre, would grow a good crop:
3. Five bushels of bone-dust, 5 bushels of ashes, and 2 gallons of oil, would grow a good crop:
4. Twenty loads of marsh mud, and 10 bushels of ashes, per acre, would grow a good crop:
5. Fifty bushels of lime, or 100 bushels of marl, mixed with 10 loads of marsh mud, woods-mould, or other good loam, would grow an acre of good oats.
6. Ten loads of barn-yard manure, and 2 bushels of salt will do so.
7. But if you can do nothing better, 4 bushels of salt, and 1 bushel of plaster, will make poor land produce much better than it would without it.
8. Twenty loads of pine shatters, mixed with 10 bushels of ashes, or the same quantity of lime, would grow a good crop.
9. Five loads of mould, 10 lbs. of Nitrate of Potash, and 2 gallons of oil, mixed together, will grow a good crop of oats.
10. Ten bushels of woollen rags, 10 loads of marsh or river mud, and 2 bushels of salt, would grow an excellent crop.

All the above proportions are intended for an acre of land, and we hazard nothing in saying, that either application would so improve the soil as to carry it through a 4 or 5 years rotation healthfully and profitably, with the exception of No. 7, while that would greatly increase the product.

MARYLAND HORTICULTURAL SOCIETY.—The next meeting of the Society will be held on *Monday evening*, the 10th inst. An interesting meeting is expected.

WORK IN THE GARDEN.

Every homestead should have attached to it a well arranged and well appointed garden; for of all the spots on a farm that is the one, if properly tilled, which assures the greatest degree of comfort and profit, and creates the most pleasurable emotions. What spectacle can be more interesting—what can fill the mind with more interesting delight, than to behold a garden filled with its fruits, its vegetables, and its flowers? We know of none; for in such an one, there is all that can gratify the most exquisite taste as to the beautiful—or ensure bountiful supplies of wholesome vegetables to our tables, or delicious fruits for the enjoyment of our family and friends.

It shall be our duty now to point out a few of the numerous things to be attended to.

Sowing Seeds.—Presuming that your frames are ready, we would have you to prepare your hot-beds as we directed last month; and then to sow cabbage seeds of different sorts, both *early* and *late*, so that your supply may be long continued. *Tomato* seed for plants for the early crop. *Egg-plant* seed for do. *Lettuce* seed for do. *Cauliflower* seed for do. and *Celery* seed for do. By the time these plants are large enough, the ground will be in a condition, owing to the absence of frost, to receive them. By sowing *Radish* seed thinly through your hot-bed, you may secure an early supply without their detrimentally interfering with the other plants.

Celery.—As soon as the frost is out of the ground, prepare a bed on a warm border, by manuring, digging and raking, then sow some celery seed to raise plants for a crop to succeed those grown in the hot-bed.

Spinach.—The moment the frost is out of the ground, manure a bed for early spinach, dig it nicely up and rake thoroughly. Your bed thus prepared, make drills with the corner of a hoe, by line, 1 inch deep, 12 inches apart, and drill in spinach seed thinly.

Parsnips, Carrots, Beets.—Seeds of each should be drilled in as soon as the frost is out of the ground. A few rows of each will furnish a family a supply for early use. A deep loam is the soil in which they each delight to grow, which must be well manured with *rotten dung*, dug neatly in, and the ground thoroughly raked.

Peas.—This is comparatively a very hardy vegetable, and may very safely be planted as early as the ground can be dug and got ready. The sooner, therefore, that you drill in a few rows, the sooner will you have the pleasure of treating your family to a dish of green peas with the accompaniment of a leg of roasted or baked lamb. The manure should be well rotted.

Beans, for early use may be planted as soon as the ground can be safely labored. The *Mazagan*, *Lisbon* and *Windsor*, are the hardest varieties. Manure with rotten dung and ashes.

Grape-vines.—Prune these, if not already done, without delay, tie up the parts left for the formation of fruit wood; then slightly dig around the vines as far as their roots extend a compost consisting of 6 parts *rotten dung*, 1 part *ashes* and one part *bone-dust*. The whole to be mixed well together and permitted to remain a few days in heap before being applied.

Raspberry Vines.—Trim and tie these up, then dig in around the vines a compost composed of *rotten dung*, 7 parts, *ashes*, 1 part.

Gooseberries.—Currants.—About the 20th of this month, trim out all the limbs that cross each other, so as to let in the light upon those that remain: dig in the same compost as recommended for Raspberries, taking care not to injure the roots. If you desire to increase your stock you may plant the cuttings you cut off.

Strawberries.—Dig in a little rotten manure between your strawberry vines, and place clean straw or tanner's bark between the rows. When your vines first come into bloom, give them a soaking watering with horse dung or soot tea, taking care to hold the nose of your watering pot well down to the ground, so as not to wash off the farina of the flowers. A bushel of horse dung and 6 quarts of soot will make a hoghead of tea, so will 4 lbs. of guano. In dry weather, watering greatly promotes the fruiting of the vines, but the flowers must not be touched with the water.

Radishes may be cultivated in the open ground as soon as the frost is out of it.

Pot-herbs.—The time for sowing seeds of this description, is, when, from the action of the frost, the ground can be worked.

FLORAL DEPARTMENT.

Prepared by John Feast, Florist, 279 Lexington st. for the American Farmer.

This month, the last of the winter, may vie with any other in the bloom of *Camellias*, as they will be in their greatest profusion of flowers. They should be liberally supplied with water, and syringed occasionally with clear fresh water, which will make them push forward much stronger. In doing so, avoid wetting the flowers, as it destroys the beauty of them when open, and sometimes prevents them from opening fully. Inarching may now be done, as also grafting, if proper stocks be at hand. If done in the Spring, they will also make fine plants the first season, if properly attended to. *Achemenes*, wanted for an early bloom, should be repotted the beginning of the month; they make a fine show through the season, and deserve generally to be recommended. By a succession of potting they can be kept in flower during the summer and autumn months; they like a coarse peatty soil, with leaf-mould and a little sand, and plenty of drainage.

Japan Lillies, if wanted to flower early, should be repotted in suitable size pots; start them into growth by keeping them near the glass, or they are apt to grow slender and weak, and make but a poor bloom.

Verbenas may be propagated. Those requiring shifting into larger pots should be attended to, and be neatly tied up as they advance in growth, to show the flowers to the best advantage.

Hydrangeas and Tree Peonys, may be brought in the house for early flowering, and if young plants are wanted, can be propagated.

Fuchias will begin to grow; and a young stock may be easily obtained from cuttings; repot them in their proper sized pots for flowering, and give them a watering of Guano, &c. to stimulate their growth. Keep them clean, with plenty of air, and thereby ensure a fine display of bloom.

Azaleas will need more water now while in flower.

Cinerarias, Calceolarias, Salvias, Schizanthus, Pansies, and other flowers of the same tribe, will require repotting into larger pots.

Petunias may be propagated and brought forward to flower early. Some of the newer kinds are quite beautiful and well worth growing, giving as they do an abundance of flowers all the summer.

Gloxinias may be repotted, if early flowers are wanted, and seeds sown in shallow pots, very sparingly covered with fine peatty soil. Seed of so fine a quality are often entirely destroyed by being covered too deep.

Cactuses will require more water; repot all that needs it, and tie up neatly, propagate by grafting or cuttings, to keep up a stock.

Daphne Odora, when done flowering, should be cut down to make them branch; put in cuttings, as its the best time to propagate all of this species.

Dahlias that are wanted to increase new sorts, should be brought forward and repotted, or plunged in some suitable place, to forward their growth, so that cuttings may be taken off and rooted, to be well established before the time for the planting out in the spring: where a large stock is not wanted, the commoner kinds can be left until the usual time of planting, and then, if necessary the roots can be parted.

Tender Annuals intended for early bloom, should now be sown, by preparing a hot-bed for that purpose. To bring them a little earlier than usual, the *Mignonette*, *Schizanthus*, *Pansys*, *Xemenesia* stocks, *Broucaillias*, *Petunias*, *Candytufts*, and others that are required, should be sown in seed pots, and when large enough, potted in small pots, till the season for planting in the borders, which latter can be done readily without injuring the plants, by turning them out with the entire balls; thereby ensuring nearly all planted in this way to live, and the advantage of an early bloom two months earlier than by the ordinary way.

Roses that were not repotted in the fall, should now be put into suitable sized pots; prune them well down, as a means of flowering better. Cuttings, if wanted to increase your stock may now be put in. Grafting may also be done, of the finer kinds on the common stocks or roots, intended for standards or dwarfs. Roses are readily increased in this way, if proper care be taken.

Now is a good time for the propagation of all Evergreens by cuttings; they may be put in pots, or boxes, in soils adapted to their growths; they should be kept in a tolerably shady and cool situation, until beginning to strike, when they will do better with a little more heat to ensure success, and are not so liable to go off by dampness. Plantings may be made out of doors whenever the weather may be favorable, of trees, shrubs, vines, creepers, or any hardy roots, also box edging. Laying off grounds, pruning ornamental trees and shrubbery, may also be attended to. Nail and tie neatly, all plants that want supports, and have every thing in readiness for the opening spring, as time cannot be better spent, than to do things at the earliest opportunity. Have your compost heaps kept dry for repotting, and your hot-beds and manure in readiness for successional beds next month, for the raising of different kinds of plants usually sown in frames, to forward their growth early in the season.

LADDER FOR GATHERING FRUIT, &c.—A correspondent asks for a cut or description of the most approved step ladder. There is to be found in our agricultural stores a very convenient ladder, suitable for the purpose designated, which is so arranged as to be folded up, to have the appearance of a long pole, and easy of carriage. It is very handy, suited for any purposes of the house or farm, and costs 13 cts. per foot in length.

TIMBER—DRILLS—MELONS, &c.

To the Editor of the American Farmer.

DEAR SIR:—Can you spare me a little room in your valuable paper, that I may ask for information on one or two points? My custom is, to make memoranda of such subjects as I feel difficulty about, and when I have entered a sufficient number for a communication, then to make my enquiries through some agricultural journal.

1st. It being frequently recommended to plant the Chestnut, how should they be protected during the first winter of planting, from the depredations of the ground mice, which I am told are very destructive to them? Timber is becoming (not to say *has* become) so scarce, that the planting and preservation and judicious management of it, has become a subject of primary importance, and is worthy of more frequent notices than we meet with in agricultural journals.

2d. A short time since I witnessed, for the first time, the operation of a wheat drill. It was Pennock's. From the cursory observation I was able to make, I was pleased with its performance. I hope the resulting crop of wheat will sustain its claims to the public notice, and justify its general adoption.

Allusion is made, in the last No. of the Farmer, to the improvement made in the points when they become worn. I would suggest to the owners of the several varieties of Drill patents, whether a still greater improvement in them might not be effected, by making the lower parts of the points, which run in the ground, so that they can be separated and detached, when worn out, and new ones substituted. If, too, the points penetrating the earth could be made of wrought iron, it would be better. This, it seems to me, might be effected, and thus supersede the expense and trouble of the entire points. When I saw it drilling, a boy walked behind it, in addition to the driver, who rode on horseback, holding a long hook with which to free the points from grass, weeds, &c. Is such additional labor necessary to the operation of the other drills which are advertised? I do not well perceive how his services can be dispensed with; for though the driver, riding on the machine, can throw out of gear, (if I may use the expression) one, two, or all of the points, if necessary, yet where they are much entangled in grass, will that have the effect of freeing them from the grass? Will it not be still necessary for the hand or hook to remove the impediment?

Can the several varieties of wheat drills be made to take the place of the corn planter, so as to plant or drop corn at any required distance in the row, or is it on too large and cumbrous a scale for that?

I am very much pleased with Seymour's Drill, as advertised, which can be changed from a drilling to a broadcast machine. We could then sow our plaster, clover, timothy, &c., I presume, more regularly than is usual.

Can not the price of these drills, Mr. Editor, be lowered, so as to bring them within the command of farmers of limited means, who, indeed, require, more than any others, labor-saving machines? I would suppose that the best of them could be offered at from \$50 to \$60, if not less. A material reduction in price would correspondingly increase the demand for them. When it is used as a broadcast machine, resort is had, I suppose, to the harrow, or to some other implement with which to cover the seed or grain. The public mind is awakened on this subject, and this, I hope, will be my apology with you, for dwelling on it so long.

I am very fond, sir, of the several varieties of the

melon—the water melon as well as the canteloupe—but am very unsuccessful in their culture. My soil is a red tenacious clay. I have been led to believe that they cannot be profitably cultivated save on flat land, that is somewhat sandy. If any of your readers have succeeded on such land as mine is, I would be pleased to learn their management. Will Mr. Pleasants, to whom we are under many obligations for his interesting and instructive communications, say whether his mode of cultivating melons, with the aid of guano and stable manure, can be successfully practised on my stiff, red highland soil? By the bye, which is the best variety of the water melon, as well as of the canteloupe? How is the Persian as compared to the Nutmeg and Green Citron? I once knew a very fine variety of the water melon, in common parlance styled the Ice-rind. It was small, or of medium size, and of a light grey rind, I think, and of exquisite flavor. Under what name is that variety sold?

It is frequently advised to administer sulphur to hogs. Is there no danger in its use, when the hogs are running at large, and a cold, damp spell of weather should immediately succeed?

What is the form of the drag harrow, and its particular use? Allusion is sometimes made, also, to the drag roller. I do not think Mr. Magoffin has yet published his mode of raising his fine variety of the apple from the crab. Many of your readers would be pleased to hear from him on the subject; and I would be very much pleased to obtain a few trees grafted with that new variety. Can they be had anywhere?

It would be better, perhaps, for us to get our apples, of the winter varieties, from the South, instead of the North, most of the winter apples of the North being, with us, either fall or summer apples. Thus, with me, the celebrated *Esopus Spitzenburg* begins to fall prematurely in the summer, and I have never yet eaten one that had come to perfection. Indeed, I may say with truth, I believe, that it is the most worthless (if that be a correct expression) apple I have. I do not doubt its excellence at the North.

Have any of your farmers tried the Mediterranean wheat on such high-land as I have described mine, red, stiff land? The general impression is, that it is appropriate for wet flat land only.

I would enquire whether the water-melon will intermix with the varieties of the musk-melon, by fecundation through the pollen.

I have been very desirous to propagate the Fig, of which I am very fond, but it has been destroyed every winter, by excessive cold or by mice eating the bark. I have equally failed to protect them by burying them, or by covering them. There is no variety, I suppose, that will survive the winter exposed? With the best wishes to the Farmer,

Louisa Co., Va.

A SUBSCRIBER.

Replies by the Editor of the American Farmer.

1. The nut of the Chestnut should be planted in the autumn, soon after the fruit is ripe, in a deep loamy soil, which should be well prepared. The ground mice are destructive to them the first winter, and we are not aware of any preventive means being successfully practiced against them. They might be caught in traps baited with some tempting food, or they might be destroyed by soaking grain in some poisonous substance and depositing it on the surface of the plot of ground in which the chestnuts were planted. Tho' scarce of fence-timber would do well to sow a few quarts of yellow locust seed.

2. Drilling machines are so adjusted that new points can be substituted in the way suggested. All ground upon which drills are used should be thoroughly and deeply ploughed, so as effectually to bury all grass and weeds, in order that there may be no impediment to their operation. We look upon the use of such an implement to presuppose that a perfect tilth be obtained as a precedent to their employment. Drilling and slovenly culture are antipodes to each other.

The drill, by taking out all but the outside drills, can be used as a corn-planter. But we think it better that a corn-grower should possess an implement expressly made for that purpose.

With regard to the prices of the drills being susceptible of being lowered, we have not sufficient information upon the cost of material and labor, to venture an opinion. It is possible, however, when the demand shall be greatly increased, that they may be afforded for less.

When used to put in seed broadcast, we think it will be necessary to use both the harrow to cover the seed, and the roller to compress the earth around them, and thus facilitate germination.

3. Melons delight in sandy soils, or sandy loams—clays are but ill adapted to their growth. It is almost impossible to say which is the best kind of water-melons, or canteloupes. The human taste is as different as there are varieties of these fruits. What one would think delicious, would not please the palate of another.

4. Sulphur is recommended to be administered to hogs when first penned for fattening in the fall,—where they will be sheltered from the weather. If exhibited to them, when running at large, it might prove detrimental. The exhibition of medicine is only safe when under cover.

5. We know of no difference in harrows or rollers from those in common use—either is dragged.

6. We cannot account for Mr. Magoffin's failure to favor us with a paper upon the mode by which he converts the *crab* into a delicious table apple. His promised revelation has excited great curiosity, and we yet hope he may take an early opportunity to allay it.

7. Upon the subject, whence fruit trees should be brought for Southern transplantation, there are very many whose opinion is coincident with that of our correspondent.

8. Our wheat-growers sow the Mediterranean wheat without regard to elevation of soil.

9. Melons of all kinds should be planted at considerable distance apart. If they are not, admixture of the farina will occur, and deterioration in quality take place.

10. Poison the mice, and build a mound of earth around the stem of the fig-tree 6 inches high, first taking the precaution to envelope the stem with straw, and we should think it would escape unscathed by the winter. We have seen them preserved in this way. On a farm 13 miles distant from this city there is quite a hedge of fig trees, that bear every year, without the slightest protection.

THE CULTIVATION OF FRUIT.—The following communication from a young farmer residing a few miles from the city, is in reference to a subject which we have felt anxious to bring more frequently before our readers, but, for various reasons, have been prevented from giving it that attention which it merits. We had the promise of one of the oldest and most experienced Nurserymen in the coun-

try, to furnish such useful information upon the subject as he was well able to give to the public, but though repeatedly called on, he has not complied with his promise. The writer of the following communication, though young in years, is old in experience. To his credit be it told, though an only child, with good expectations, he chose the profession of agriculture, and placed himself under the tuition of one of the best farmers in Baltimore county, under whose auspices he went through a regular course of instruction, accustoming himself to every duty requiring his attention on the farm, so as to enable him to be perfect in the practice as well as the theory of his business. Having thus qualified himself for the duties of life, he entered upon the farm now occupied by him, and the improvement which is visible in every part of it, since he took it in hand, shows a skilfulness and success which are seldom surpassed by those many years his senior in age. Our young friend will pardon us for our personal allusions, as our sincere regard for him individually, and the gratification experienced in witnessing his zeal and worth, justly calls for a tribute of commendation at our hands.—Would that more of the sons of our State, would follow such a noble example. How much more independent a life would they have led than that experienced by the thousands who throng our towns and cities, adding to the number of those engaged in what is termed the learned professions, without increasing their dignity, and who drag out a life of wretched mediocrity; or of those who engage in trade, that most precarious and uncertain of all occupations, where, in the ratio of ninety per cent. they become wrecked in fortune, and sometimes in character, condemned to suffer every possible privation, or if they be so fortunate as to have them, fall back upon their parents for support—upon those parents, who, in their ambition to figure as merchants, they had deserted when their labors would have been of value on the paternal estate.

To the Editor of the American Farmer:—

DEAR SIR:—I have been a subscriber to the Farmer for 8 years, and during that time no one, perhaps, has derived more pleasure and profit from its pages than myself. Each number is fully equal in amount of information to any agricultural periodical I have seen, and that kind of information which should commend it to the attentive perusal of every farmer of Maryland and the adjoining States. But there is one subject to which, in my opinion, the attention of its readers is not called with sufficient frequency by its correspondents, namely, the cultivation of the apple. While every county of our State gives abundant evidence of the spirit of improvement which is abroad in the land; while the galled and barren wastes are rapidly disappearing, and luxuriant fields of clover and timothy are taking the place of broom sedge and poverty grass, in too numerous instances but little attention is paid to the orchard. On many rich and productive farms the trees may be seen, their heads an impenetrable thicket of suckers—their trunks and limbs moss-grown, and their unthrifty appearance contrasting strangely with the well cultivated fields around them. But I know a great many farmers say the price of apples does not justify much expense in pruning and cultivating their orchards. If this be true, (and it is true in some cases) the fault is in the varieties cultivated. There is too much summer and fall fruit in many orchards, which will not pay the cost of carrying to market where peaches are

abundant. The Baltimore market is every year glutted with forward apples, which, during the peach season, can sometimes be bought as low as 25 cents per bbl., but after the peaches disappear, the price of apples goes up, and by the 1st of January the commoner sorts often bring \$2, and choice ones \$3 and upwards per bbl. Those who have a quantity of early fruit, should head in the branches of the trees and graft with choice late varieties, and they will find the value of the crop increased ten-fold. The labor of pruning an orchard is not so great as many imagine. I know that when the trees have been long neglected, and the branches have become interwoven and the trunks mossy, it is a tedious job, particularly to one who fears he will not be remunerated for his time and labor; but when the pruning is commenced—when the trees are set and attended to every year without fail, it is nothing more than an agreeable amusement, and requires much less time than is spent in fox hunting, gunning or fishing, by many who have not time to attend to their orchards.

As some are afraid of making an outlay on their fruit trees, I will say, I know a gentleman who bought a farm in this county on which was an old orchard; he hired a man to trim it and scrape the bark of the trees. It cost him over 60 cents per tree, but he was a northern man and knew the value of good fruit. Some of his neighbors thought he had better spend his money for lime and manure, but he has convinced them that an orchard will pay for manuring and cultivating, as well as grain or grass.

Another reason given by farmers for not cultivating their orchards, is, they are too far from a market; but I believe there are many who have not counted the cost of transportation, as an example will show. Three years ago, I was in Washington county, Md., and saw some orchards of fine pippin apples, the ground under which was covered with fallen fruit. On enquiring of the owner of one of them, I found he saved as many apples as supplied his family, and left the balance to the hogs. They would have brought \$2.50 per bbl. in the Baltimore market, and the freight to Baltimore was only 50 cents per bbl. There are, I should think, but few localities in this State so distant from navigable water, railroads or canals, that the freight would much exceed that amount.

The pear, owing to its uncertainty, can scarcely be so generally cultivated as the apple, yet in the vicinity of cities and towns, no fruit bears a better price. But few choice varieties are found in the Baltimore market; some seckel pears usually make their appearance in the fall, which sell readily at \$1 per peck, and later sorts bring 50 cents. The pear tree flourishes well in the vicinity of Baltimore, on almost any soil, and several choice kinds, known to be full and constant bearers, might be profitably cultivated. In another communication, I propose making a few remarks upon planting, pruning and cultivating the different fruits grown in this section of the State.

A work on fruit, suited to the latitude of Maryland, is much wanted. Those who rely for information and direction, in the choice of varieties, upon books published in Northern States, are frequently disappointed; but if the farmers of our State will make known, through the "Farmer," their experience in this department of agriculture, the necessity for such a work will be done away with. Yours respectfully,

A. W. S.

Baltimore Co., Dec. 9th, 1850.

LETTING FARMS.

It is a common remark, that to let a farm to a tenant, in nine cases out of ten, is to destroy its fertility. Why is this so? It is because of the tenure of the lease, it mostly being from year to year; the tenant has, therefore, no inducement to lay out any thing in the improvement of the land. We have known instances where tenants omitted to use the resources on the places they respectively occupied, fearful that, if they improved their land, their landlords would raise their rents. We have in our mind at the present moment, a tenant who occupied a river farm, whereon there were immense deposits of oyster shells in a high state of oxidation—whose shores were lined, spring and fall, with sea-weed, and who had the right of using the mould and leaves from about seven hundred acres of wood-land, but who, to our utter surprise, never availed himself of either of these fruitful sources of fertilization, although he had occupied the farm for twenty years. Upon our expressing our astonishment that he did not use them, he assigned as a reason for his not having done so, that he rented it from year to year, and, that, if he were to improve it, the gentleman from whom he rented would raise his rent. It was in vain we endeavored to point out his mistaken policy. Now, if this man had held a lease for any considerable number of years, the probability is, that he would have freely used the resources of the place, and improved both the land and his own pecuniary condition, whereas, he left it, after twenty-three years occupancy, dead poor.

Landlords, who have farms to let, should ponder this matter over well, as they are deeply concerned. Leases for years, might be so conditioned by landlords, as that, while they insured the improvement of the land, they would offer a guaranty to tenants, and thus throw a shield around the interests of both.

APPLICATION OF BONES AND LIME.

To the Editor of the American Farmer—

DEAR SIR:—Being lately a subscriber to your valuable paper, I would like to have some information in regard to the application of Guano on corn. I have a field to cultivate the present year of about 40 acres, that I expect to lime in the spring with about 50 bushels to the acre. I would like to know whether it would do to apply the Guano at the same time, and how to do so? The land is of the white clay or white oak soil, rather low, and requires a great deal of draining, and the worst of all, has been very much reduced. Any information you can give me, sir, I can assure you, will be thankfully received, and oblige

Yours respectfully and truly,

A SUBSCRIBER.

Reply by the Editor of American Farmer.

We should not apprehend any disadvantage from applying Guano and lime, provided the Guano be mixed with plaster, in the proportion of 25 lbs. of the latter to every 100 lbs. of the former, and ploughed in; the lime should then be applied as a top-dressing, care being taken to distribute it evenly. As corn is a voracious feeder, and our correspondent's land is reduced in fertility, to ensure a good crop, he should at least apply 400 lbs. of Guano and 100 lbs. of plaster to the acre, and be careful to reduce the soil to fine tilth by the free use of the harrow.



BALTIMORE, FEB. 1, 1851.

TERMS OF THE AMERICAN FARMER.

\$1 per annum, in advance; 6 copies for \$5; 12 copies for \$10; 30 copies for \$30.

ADVERTISEMENTS inserted at \$1 per square of 19 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made.

Address, SAMUEL SANDS, Publisher, At the State Agricultural Society Rooms, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

The quarterly meeting of the Board of Managers of the Maryland State Agricultural Society takes place at the hall of the Society, on Wednesday, the 5th of Feb., inst. at 10 o'clock, A. M.

To Correspondents.—"A North Carolina Farmer," by "Davie"—and a communication from E. Bishop, Esq. of Washington Co., Md., who, we learn, is one of the best farmers in that section of Maryland, are received, and will have a place next month. Other communications are also received.

The present No. contains numerous exceedingly valuable and interesting papers—that from the pen of Mr. Ruffin, on the culture of clover, and the suggestions of Mr. Holcomb in regard to the operations of Agricultural Societies, will, we are very confident, command the most marked attention of our readers. We flatter ourselves that some remarks of our own, on the renovation of land, will also be found worthy of consideration.

THANKS.—We tender thanks to our friends who have so promptly responded to our call made in the Jan. No. for the settlement of their dues. The many kind expressions of satisfaction as to the manner of conducting our journal, are extremely grateful to our feelings, and give the assurance that we are not toiling in vain. We refer those who have not remitted their dues, to the mark on the cover of our last paper, where will be found the amount of indebtedness, and the time to which the same will pay. We are also in the receipt of many new subscribers during the month.

STATE CHEMIST.—It will be seen by the advertisement of Dr. Higgins, that he has permanently located his laboratory in this city, and that the examination of specimens of soils, until further notice, will be confined to Howard District. Attention is particularly directed to the Dr.'s instructions in regard to the specimens. Any specimens left at our office will be delivered at the laboratory.

THE SHINNEY PEAS.—In answer to our call for information as to the result of the planting of this pea, received by us from Mr. Chisolm, of South Carolina, Mr. Benjamin Welsh, of West River, Md., writes:—

"I take pleasure in informing you of the result of the Shinney Peas you were kind enough to send me last summer. I neglected to plant them for two weeks after I received them. The early frost killed them while in full bloom and bearing, consequently I lost a great many, not having ripened, and some by the chickens;—I saved a peck and a half—a beautiful article. They were as luxuriant in growth as any thing I ever saw of the kind. I think this is hard to beat."

ANOTHER AGRICULTURAL IMPLEMENT ESTABLISHMENT.—It will be seen by his advertisement, that Col. J. C. Atlee has taken a warehouse on Light street wharf, immediately opposite the Eastern Shore Steamboat wharf, for the sale of the various Agricultural Machinery and Implements manufactured by himself, and also for the sale of Agricultural produce. We welcome him to our city, and commend his enterprise to the fostering care of the farmers of our own and neighboring states. Mr. Atlee has been manufacturing at his residence in Carroll Co. and the increasing demand for his implements, from the tide water regions, has induced him to establish himself in Baltimore. The increase of trade from the farmers, is daily rendering this market the most important and best in the United States for that business, and we are gratified in being able to state, that all our manufacturing houses are doing a most thriving business.

LIME.—It will be seen by his advertisement, that Mr. Jas. L. Sutton has purchased the lime establishment of Mr. E. J. Cooper, and is prepared to furnish farmers and others with lime on the most accommodating terms. This establishment was the first, or among the first, in this vicinity, which undertook to supply this invaluable article to the farmers of Maryland and the neighboring States—and the increase of the demand and supply during the last ten years, is almost incredible. Mr. Cooper has done the State much service, and we deeply regret that circumstances have rendered it necessary for him to retire from the business. His successor is a gentleman of much energy, and will, we have no doubt, use every effort to render satisfaction to the customers of the establishment. His facilities are very great, and he will, we trust, meet that encouragement to which he is entitled, by his efforts to serve the public.

Ground Bones.—Mr. Horner, near the Canton grounds, is ready to furnish Bones in any quantity, at the lowest rates.—See his advertisement. We are glad to find the great increase in the demand for this article—the most permanent of all the fertilizers.

Seeds, Trees, Plants, &c.—Such of our friends who may wish to obtain choice plants, trees, seeds, &c. are referred to the advertisement of Mr. Jno. Feast, on another page. They may rely on having their orders faithfully executed.

Farmers and Planters' Agency.—We refer our country readers to the advertisement of the Messrs. Marriott, on another page. These gentlemen have located themselves in a most central place for their business. The references which they give, show that they are responsible men, well versed in their business, and their object is, among other things, to carry out the suggestions of our correspondent "Patuxent Planter," in the last No. of the Farmer. We have good reason to believe, that farmers and planters who may have surplus produce to dispose of, of that minor character that "P. P." alludes to, will find their advantage in making their consignments to these gentlemen—those also who may wish to purchase Horses, Mules, Oxen, Milch Cows, and also the various Fertilizers, will find it to their interest to employ these gentlemen to make selections for them—their experience in such matters has been considerable, and we commend their enterprise to the patronage of the public.

A VALUABLE SALVE.—Our "better half" hands us the following, and cognizant as we are of the facts therein stated, we feel it our duty to give it a conspicuous place in our journal:

To the Editor of the American Farmer:

A visit to a friend in the neighborhood of this city, during the past summer, made me acquainted with the virtues of the bark of the Elder tree, which I feel obligated to make public through the medium of your journal. The lady with whom I sojourned, informed me of a boy, whose foot had been cut, and was in almost a putrid state when she examined it, none of the usual appliances being found of any service. She asked permission to apply a salve, which she had, and leave being granted, in a very short period a complete cure was effected. Shortly after, I was paying a visit to some friends in Washington Co. of this state, where I heard of an old negro man, who was suffering the most intense agony, from a sore foot, which had become so offensive that it was impossible for any person to remain in the room with him. He was given up for death, as incurable, except by amputation. I mentioned this salve to the owner of the old man, and on my return, forwarded a box of it, which was used upon the foot, and I was gratified to learn that it had effected a complete cure—and a venerable friend in the same neighborhood, who had his hand cut, whilst killing pork, having sent for the recipe, in order to make the salve, I applied to the lady who had supplied me, for a copy, which, as it is simple, and convenient to every farmer, I herewith hand you, hoping that every lady at the head of a family, will prepare some of it, so as to be ready for use, in her own family and neighborhood. Much suffering may be obviated by its use, I have no doubt; and as there is enough of misery in the world, it is our duty to use every means in our power for the alleviation of it in our species. Feeling conscious that much good can be effected by the means here indicated, I hope every lady in whose homestead the American Farmer may have an abiding place, will make a trial of this salve, as opportunity may offer.

S. B. S.

Elder Ointment for Burns, &c.—After peeling off the outside bark of the elder, scrape off the green bark that is under, and stew it in lard till it is crisp; then strain it in a jar, and put it away to heal a blister or burn, or an old sore.—*Mrs. Lea's Domestic Cookery*, p. 177.

THE FARMER'S EVERY DAY BOOK.—We are indebted to the politeness of the publishers, Messrs. DERRY & MILLER, of Auburn, N. York, for a copy of the above work. It comprises 654 large octavo pages, is printed on beautiful paper, and as beautiful type. The mechanical execution of the work is of the most superior order, and reflects great credit upon the enterprising publishers. The author is the Revd. John L. Blake, D. D.

We have not yet read the work through, but from the cursory view we have taken of its contents,—which are varied—embracing the entire range of the farmer's life—the whole economy of the farm, the improvement of its soil, the management of the stock, the culture of the fields, the use and kind of implements to be used and how to use them—the education of farmers, of farmer's sons and daughters, the selection and duties of a wife, and as a consequence, the bearing and deportment of a farmer-husband—the cooking of the viands, the treatment of diseases, both in man and beast—

the moral and religious duties of the household—the moral obligations of employer and employed, each to the other—the diseases and curative treatment of the fruit trees, and the culture and management of the garden, besides a thousand and one other things, too numerous to mention. In a word, the work is a faithful epitome of farmer-life, illustrated in the language of truthfulness, and originality of arrangement, and may be said to be the best illustration of Rural life, its wants, its necessities, and the obligations and enjoyments of its followers, ever published in America. The price of the work is \$3, cheap at that, and only to be had of the agents of the publishers.

STEAM SAW-MILLS.—The Junction Valley Turnpike Company are operating two Portable Steam Saw-Mills, purchased of George Page, of Baltimore. These mills are sawing timber with a rapidity hitherto unknown in this section, where the old fashion water-power saw-mills have been in use. They are sawing from three to four thousand feet of three inch plank, surface measure, per day. A log sixteen or eighteen inches in diameter, and sixteen feet long, is sawed into three inch plank in about eight minutes. The saw goes through the length of the log in about twenty seconds. Each mill requires about ten hands to operate it. The mills are removed from one station to another as the timber is sawed up. But a small portion of the slabs are required for fuel, and it is believed that the saw-duct would almost supply fuel. The introduction of these mills in this section, with our improvements completed, we think must open up a profitable business in the timber trade.—*Lexington (Va.) Gazette*.

We are pleased to see this approving notice of the machinery of our ingenious townsman, Mr. George Page, whose inventions, by their simplicity, power, and utility, have long since placed him in the front rank of American mechanics. And we think we can promise our Virginia friends, that, when they come to be intimate with the management of Page's mill, with half the force of hands, they will be able to saw more than twice the quantity of lumber, per day, named in the above paragraph. For ourselves we have long since considered George Page's Portable Saw-mill as among the most masterly inventions of this inventive age. And it may not be inopportune here to mention, that his recent improvements have greatly added to their efficiency.

We congratulate our friends in Western Virginia on the commencement of their Plank Road Turnpike, wish them a speedy termination to the laudable enterprise which they are prosecuting with so much becoming spirit, and trust, as we believe it will, that it may prove the pioneer of a series of improvements tending to elaborate, and bring into usefulness the vast resources of that interesting portion of the Commonwealth of Virginia.

The Pictorial Cultivator Almanac.—We are indebted to our friends of the Albany Cultivator, for a copy of this work. It is handsomely gotten up, both in paper and printing, and beautifully embellished with numerous finely executed cuts, while the reading matter is useful and instructive, and eminently adapted for the perusal of farmers.

Magazine of Horticulture.—This work, edited by C. M. Hovey, Boston, Mass., commenced a new volume in Jan. It is an old and standard work, conducted with ability, and should be in the hands of every florist and horticulturist.—\$2 per ann.

A COMPOST FOR CORN.

If you would compost the raw materials on your farm, on your shores, in your woods and marshes, you may render yourselves independent of the monopolists, into whose hands the Guano trade has fallen.

- 20 double-horse cart loads of river or marsh mud or wood's mould.
- 10 bushels of ashes,
- 2 bushels of bone-dust.
- 1 bushel of salt
- 25 pounds of sulphate of magnesia, and
- 3 gallons of oil,

if composted together, made up into a conical heap, the upper layer to be of mud or mould, will, in a few weeks, prove to be as efficient manure for an acre in corn, or any other grain, or root crop, as would 400 pounds of guano, or 20 loads of stable manure. Resort then to your shores, to your marshes, and to your woods, for the raw materials to be manufactured into manure. If you have no ashes, and cannot conveniently get any, but have marl, substitute the ashes by 100 bushels of marl; provided your land needs liming. If you think there is lime enough in your soil, substitute 5 or 6 loads of barn-yard or stable manure for the ashes.

If your land is sandy, and clay convenient, an addition of from 5 to 10 loads of that earth to the above quantities, will greatly add to the value of the compost.

To be taxed with the regular profit, nay, with three or four fair profits on an article, and to have to stand a share of 240 lbs. on each ton of guano besides, is enough to arouse you to the most energetic resistance against such imposition. The most effectual resistance you can offer, is, to go to work zealously, collect your domestic resources, convert them into manure, and place yourselves in a position that will render you independent of extortioners.

Effects of Combined Efforts.—A subscriber at Petersburg, Va., in remitting his annual dues to the American Farmer, adds:—"Be pleased to accept my best wishes for your success, and the wide dissemination of your valuable journal."

"We have a Hole and Corner Club in this neighborhood, of five years existence; of its effects it is needless to speak—at the December meeting, a few days since, the President, in his annual address, stated the aggregate increase in the crop of wheat since 1845, of the members of the club, to be 166 per cent. At some future time I shall probably give you some account of our club and its success."

J. M. J."

The promised communication will be very acceptable.—*Editor.*

Amelia Co. Ho., Va.—A letter to the editor enclosing payment for 16 copies of the Farmer, dated Jan. 1, 1851, says:—

"We have now snow four inches deep upon the ground; for the few days past the weather has been cold and begins to look like winter and getting ice. We have had no pork through this county of consequence; that sold at \$6½ per cwt. The buyers not half supplied yet."

Wheat I am sorry to say looks badly, it was seeded late and got but little start before winter came on. Corn sells at, \$3½ to \$4 per barrel; Seed Oats 75 cents to \$1 per bushel; Fodder \$1 per cwt."

Good.—A subscriber at Richmond, in remitting his own and a neighbor's subscription to the American Farmer, wishes us "as many subscribers to your [our] valuable magazine, as there will be people at the World's Fair at London." By the bye, we should like to help swell the number at that grand show. Among our mechanics and manufacturers who intend being present with their machinery, are Mr. Page, with his Saw Mill; Mr. Hussey, with his Reaping and Mowing Machine; Mr. Whitman, with his Railway Horse Power and his Straw Cutter; and Mr. M'Mullen with his Seine Netting Machine.

Anne Arundel, Md.—A subscriber in this county, in renewing his subscription, remarks:—"Please accept my sincere wish for the success of your valuable Journal, and should all young beginners receive the same benefit from it, that I have, no homestead would be without it, and no 'young beginner' would sit beside the family hearth without reading, aye, re-perusing it, for it is like some wheat, it becomes better and better the oftener you sift it."

Cecil County, Md.—A subscriber in remitting his subscription from this county, adds:—"The Farmer' is exerting a good influence in this county, as well as in other sections of our State, and I hope the day is not far distant when it will be taken, and paid for, and carefully perused by every Agriculturist, practical or theoretic, in the State of Maryland."

Harford.—A subscriber in Harford, in remitting his subscription to the Farmer for the present year, makes the following remark, which we give as a sample of the feeling evinced in numerous communications received during the past month, in reply to our intimation for a renewal by those whose term had expired:

"Permit me to congratulate you on the excellence of this journal, which, though not a practical farmer, I would not be deprived of for many times its price. Its worth should not only gratify the pride, but command the patronage of every Marylander, and the South in general."

AGRICULTURAL SOCIETY'S PREMIUMS.—In a former number we suggested that the premium lists of agricultural societies should be so arranged, that winners of prizes might have the privilege of obtaining agricultural implements which may be exhibited on the show grounds, if they so desired, in preference to silver ware, &c., as now required. The following from a gentleman of a neighboring State, who generally takes an important part in our State shows, coincides in our view of the matter, and we hope the subject will be canvassed in the minds of our board of officers, prior to the meeting in May, when the list of premiums will be made out:

"I think probably it would be well for the Society to allow their premiums to be paid in agricultural implements selected from those offered for exhibition. Would it not be an inducement for manufacturers of agricultural implements to make a larger display and induce a greater competition; and would it not be more acceptable in many cases, to the farmer? At least I think the Society could offer them their choice. I make the suggestion, leaving it to your better judgment to make it to the Society or not, as you think best."

INSPECTIONS AND RECEIPTS OF PRODUCE IN BALTIMORE, FOR THE YEAR 1850.

(Abridged from the Prices Current of the Balt. American for the American Farmer.)

Inspections of Wheat, Flour and Meal in the city of Baltimore.

1850—Flour, Howard street, Susq., City Mills, and Family,	882,437 bbls.	27,630 hf bbls.
1849— " " " " " "	750,686 " "	27,677 " "
1850—Rye Flour, " " " "	- " "	- 5,419 bbls.
1849— " " " " " "	- " "	- 8,007 " "
1850—Corn Meal, " " " "	42,403 bbls.	3,369 hf bbls.
1849— " " " " " "	51,772 " "	2,051 " "

Inspections of Wheat Flour for the last 10 years.

1811—628,974 bbls.	1846—850,116 bbls.
1842—558,282 " "	1847—956,456 " "
1843—560,431 " "	1848—736,441 " "
1844—499,501 " "	1849—761,519 " "
1845—576,745 " "	1850—882,592 " "

The total Receipts of Wheat into this city during 1850, as near as can be ascertained, amounted to, bushels, 2,275,000; of which 1,680,000 were taken by millers, 545,000 shipped coastwise, and about 50,000 shipped foreign. About 200,000 of the above were received from Pennsylvania.

Total receipts of Corn, for 1850, bush. 3,250,000; of which there were shipped to foreign ports 450,000; used in distilling, domestic consumption, and grinding into meal, 800,000—leaving for coastwise shipment about 2,000,000 bushels.

Total receipts of Oats, 600,000 bushels, the large bulk of which was required for home use—but little shipped.

Total receipts of Rye, 140,000 bushels, nearly all of which were consumed by distilling—100,000 bushels of this amount were received from N. York.

Of Beans, 4,000; and of black eye Peas, about 30,000 bushels—the former used for home consumption—the latter shipped to the West Indies.

Molasses—The imports in 1850, 12,984 bbls. and casks, and 9,017 hhd. and tierces.

Rice—The receipts in 1850, 3,277 tierces and casks, and 514 bbls.

No. of Cattle and Hogs weighed at the State's Scales in Baltimore, from Nov. 1, 1849, to Nov. 1849 :

26,807 Beef Cattle, gross weight of which 26,650,174 lbs. at 3½ cts. per 100 lbs.	\$9,327 56
135,375 Hogs, 27,057,644 lbs. at 3½ cts. per 100 lbs.	9,460 17

Repairs, salaries, &c. 18,797 73

Net amount to the State, 2,291 89

From Nov. 1849 to Nov. 1850. 16,505 84

31,437 Beef Cattle, 29,144,085 lbs. at 3½c. 10,200 43

92,753 Hogs, 20,174,872 lbs. at 3½c. 7,061 20

\$17,261 63

Expenses, 2,243 03

Net amount accruing to the State, 15,018 60

Import of Coffee into Baltimore in 1850 and 1849.

1850—184,906 bags, of which 149,345 from Rio.

1849—200,145 " " 166,386 " "

Import of Cotton into Baltimore during 1850.

From Charleston, 5,838 bales—New Orleans, 3,589

Savannah, 2,130 " Mobile, 1,747

Apalachicola, 1,290 " Total, 14,084 bales

This does not include a great deal brought from Va. and N. C. by small vessels and steamboats.

Fish—There were 24,569 bbls. and 3,363 hf bbls. Mackerel; 7,263 bbls. and 926 hf bbls. Shad; and 29,262 bbls. and 918 hf bbls. Herrings inspected in this city during 1850.

Sugar—The imports in 1850 were 18,537 hhd. 6,649 bbls., 3057 boxes, and 11,203 bags—of which 8,962 hhd. and 2,661 bbls. were from N. Orleans.

Tobacco—Inspections in 1850, in the 5 State warehouses, hhd. 41,833

Stock on hand Jan. 1, 1850, 19,628

61,461

Amount exported and consumed in 1850, 50,844

Leaving on hand 31st Dec. 1850, hhd. 10,617

The kinds inspected were Md. 27,085 hhd.; Ohio 13,965; Ky. 756; Va. 15, and Pa. 12. From the above statement it will be seen that the stock on hand on the 1st January, 1851, was 10,617 hhd.—The stock at the same period of 1850, was 19,628 hhd. and of 1849, 32,690 hhd.

The stock on hand on the 1st January, for twenty years past, has averaged hhd. 13,927

For ten years past, " 17,881

For five years past, " 25,510

According to the latest accounts from Bremen and Holland, the stocks in those markets at present are about 10,000 hhd. less than at this time last year.

From persons largely interested in the Tobacco trade, and well informed in relation thereto, we have gathered the following general statements:

The crops of Tobacco to come to market in the year 1851, are estimated as follows:

Virginia, about	30,000 hhd.
Kentucky, Tennessee and Missouri, abt	50,000 " "
Maryland, about	22,000 " "
Ohio, about	14,000 " "

From the above estimate it will be seen that the quantity produced in 1850 is much less than two-thirds of the usual production in the States named. The entire crop of Virginia will be required for home consumption. About 15,000 hhd. Kentucky, and 5000 hhd. Maryland will also be wanted for home use. Owing to the increase of population by immigration and otherwise, the domestic consumption, which was a few years ago so small as not to be considered worthy of notice, has now increased to a very important item, and affords a steady home market for a large portion of the production.

The quantity of Maryland Tobacco left for export to Bremen and Holland in 1851, will only be about 17,000 hhd. which is not more than half the amount usually shipped to those countries every year.

Of the Kentucky Tobacco contracted for last year by France and Spain, through their agents in this country, less than one-third has yet been purchased, and those governments will this year require the deficiency to be made up, in addition to their average annual supply, which, with the quantity required for England, will take the entire crop, leaving nothing for the rest of Europe, Africa, South America, the West Indies, &c. The Tobacco markets throughout the world are in a much more healthy condition than has ever been known, and it is thought prices will rule very high the coming season. In Maryland, while the production has been more than half an average crop, the price is nearly three times as high as usual, so that the planter will receive more for

his diminished crops than in ordinary seasons of plenty.

[Since the above was in type, the following, from Europe, has come to hand by a late steamer:]

Tobacco.—The following, on the tobacco trade, is furnished by Messrs. Clagett, Son & Co. Liverpool:

"A notable year in the annals of the tobacco trade has been brought to a close. It was clearly apparent that the entire crops of America, in the years 1846, 1847, and 1848, and we may now add, 1849, were wholly insufficient to meet the annual consumptive demands of the world; and as during the same period, while England was convulsed by commercial and political revolutions, we had no evidence of extended cultivation, of indigenous tobacco to meet the positive deficiency of the American crops, it was equally clear the wants of an increasing population could only have been supplied from the stocks accumulated from 1840 to 1845—years of large production and in excess of demand. With these facts we could not avoid a course of advancing prices, even allowing for the contingency of an excessive crop to be raised during the year, to which the planters would be stimulated, but which had it been realized, would not have been available until the summer of 1851. But a course of untoward events frustrated the best endeavors of the growers, and to trace the history of the intended large crop of 1850 is simply to narrate a long train of misfortunes. Wet and drought, flood and frost, in turn have been the agents of destruction, so that now the highest estimates we have seen of the whole of the crops of the United States, in 1850, do not exceed 119,000 hhd.

The advance in the prices has been continuous throughout the past year, and at no period has there been any symptom of a retrograde movement. Month by month our quotations have been raised sometimes by slow degrees, but more often by rapid strides as intelligence has been received of a new disaster to the crop.

Tobacco.—From the Amsterdam price current and Review of the market during the past year we take the following statement respecting Ohio and Maryland Tobacco:

Tobacco.—A good demand at advancing prices characterised business during the whole of the year. **Maryland.** Imports remained 3000 hhd. and the sale 2000 hhd. below 1849; the market however was continually on the advance, and transactions therefore of much more importance; in the first six or seven months prices advanced about 3 to 3½ cts; but since August the demand of our manufactories created the much more sensible favor in prices of about 6 cts. for the most ordinary descriptions; the middling and good sorts did not rise in proportion; in December transactions from the first hands were however of not much importance, owing to the late season, and high demand of holders, but the confirmation of a short crop and the small stock in Europe will no doubt lead to a further advance.

Stock of Md. and Ohio, Jan. 1, 1850 hhd. 5094
do do do Jan. 1, 1851 do 3122

Whiskey.—Inspected in Baltimore, 1850, 1,067 hhd. and 31,523 bbl.; of which 665 hhd. and 7,837 bbl. were received by the Tide Water Canal, and 928 bbl. from New Orleans. Large quantities are supposed to be sold without inspection.

The receipts at the Balt. Custom House in 1850,

were \$1,026,340, being larger than for any previous year. The value of articles exported, was, to foreign ports, \$8,278,418—of this amount was sent to California, \$2,027,986.

DRILLS AND DRILLING—RYE FOR STOCK.

FARM CONTENT, near Westminster, Md. }

Dec. 14th, 1850. }

To the Editor of the American Farmer—

Feeling it a duty devolving on every subscriber to your valuable journal, to contribute towards sustaining its reputation as a practical and valuable paper, I am disposed to do my share with cheerfulness. Any information I am able to give my brother farmers (though but little) is at all times at their service.

Seeing in your Dec. No. some enquiries to which practical answers are desired, and having the information desired by your correspondents, and highly approving of this manner of seeking information, I feel, as I have said, in duty bound to contribute my mite towards making of general use your able journal, from which I have drawn so much gratification. I think it part of the object to be desired in conducting an agricultural paper, that its columns should not only be open to the subscribers to discuss matters of general interest to the farming community, but that any one feeling desirous of asking information on subjects of general interest, should have every facility afforded them; and that subscribers should evince a readiness and desire to give any information in their power.

In answering the enquiries of your correspondent from Virginia, Mr. Christian, on the subject of Drills and Drilling, though not one of the persons whose names you have called upon, (each of whom have established for themselves the character of enlightened agriculturists, and whose fame has soared far and wide,) I may have this advantage of them, and that is, of having worked a drill myself, and what I say may be depended on as the result of personal observation. I am one of those who, when it is necessary, take hold of the plow or follow the drill, particularly the latter, as it is an operation of so much importance that I am reluctant to trust it to those who do not feel responsible for the result. Mr. Christian asks whether the wheat drills will operate on hilly and stony ground, and whether the ground should be thoroughly pulverized to use the drill.

I have never used any drill except the one patented by the Messrs. Pennock, of Chester Co., Pa. One of these I have had in use two seasons. The first season something upwards of two hundred, and the latter some eighty acres was put in with it on my own farm and in the neighborhood. A great deal of the ground was rocky, and some stony; nearly all of the land was hilly and broken, notwithstanding which the drill acted admirably, not losing an hour's time or incurring one cent's expense in repairs. I have seen a good many drills, but none I would prefer to Pennock's patent. The only accident that can occur, on stony or rocky ground, is the breaking of a half inch wooden pin, (a supply of which is carried in a box attached,) which breaks before the strain is great enough to do any injury to the machine. The feed boxes being made independent of each other, enables it to be used on the steepest hill-sides without spilling the seed. I would not recommend Mr. C. to drill his ground in a rough state, but I think, with the use of the harrow and roller, any ground may be

put in proper order for drilling. No labor is better bestowed, or returns a greater profit, than that expended in reducing ground intended for wheat to a proper state of tilth. But so well am I convinced of the advantages of drilling, that I would not hesitate in drilling even rough ground, as I believe the certainty of a crop to be much more secure than broadcasting the same land. You have an equal or better chance for its coming up, and are almost entirely exempt from the effects of the frost during winter.

A correspondent in your last number, over the signature of "A Seeker after Information," wishes to cultivate rye for his stock, particularly his work horses and mules, and asks for information that can be relied on in regard to the manner in which it is fed to stock, and how cultivated. Rye is cultivated in this section, for feed for horses alone. It is cultivated in precisely the same manner as wheat, except that not quite so much seed is required. On good land, one bushel per acre is sufficient; where the ground is thin, a bushel and a half is not too much. It is sown here from the latter part of August until the middle of October. Many farmers sow it in corn at the last working in July, and plow or cultivate it in. Good crops are often made in this way on good land. Rye is universally fed as chop; most usually chopped with an equal quantity of corn. It is then mixed with cut straw or chaff, with as much water as will cause it to adhere to the straw. It is a very strong food for work horses, and I think the most economical used.

Your correspondent need apprehend no bad effects from the rye beards—they are perfectly harmless. I often, when short of rye straw, or when too busy to spare the time to cut the straw, feed the chaff of wheat, and frequently the chaff of Mediterranean wheat, (which has a much longer and harsher beard) with perfect impunity.

If you consider the above of sufficient interest to the enquirers, you will please publish it in your valuable journal; and should it be of the least service to any of your subscribers, I shall feel amply compensated for the time I have spent in writing this communication.

AUG. SHRIVER.

BRICK TILE.

To the Editor of the American Farmer—

I have had much experience in the use of this article, (the same that I understand you are engaged in manufacturing,) and infinitely prefer to any other material for laying an under-drain, both on the score of economy in the first cost, as well as for its great durability. They are cheaper than boards, as they cost but a cent and a half a foot, and will last forever, and the boards will last but about six or seven years. You suggest that some information as to laying the tile is desirable. It is the simplest thing in the world—just laying them in a row, end to end, along the bottom of the ditch. If the bottom is soft, a board should be put down for them to lie on, (but this will seldom be required) and then cover them over two or three inches with hay or straw, and fill up with earth. The earth soon moulds to the shape of the Tile, and while the water will ooze down from the top or in from the sides of the drain, through the interstices where the Tile connect, there is no danger of the earth getting in. I have an under-drain laid with these Tile two or three hundred yards in length, where the water goes dry a part of the year, and then again the drain carries it off as soon as there is a

supply. I am now in the act of laying an under-drain, with these Tile, several hundred yds, to conduct water to carry a water ram. I lay two lines of them in the same ditch, as my head of water is large; in this way the whole is covered, instead of having an open canal or ditch, so that my cattle will pasture over it, nothing being seen but a little box, at the far end of the driving-pipe, and the top of the brickwork that contains the ram. These Tile are of great convenience for many purposes, and must become extensively used. I have been asked the question recently, by several of my neighbors, as to where they could be had, for since you, for the benefit of your neighbors, got our Delaware Tile Making Machine, (the only perfect one, I believe, in the country,) we are likely to be without a supply.

Yours truly,
CHAUNCEY P. HOLCOMB.
Devondale Farm, near New Castle, Dec. 17, 1850.

GREEN CROPS AS CATTLE FOOD.

George Sinclair, the celebrated author of the work on grasses, entitled, "*Hortus Gramineus Woburnensis*," whose experiments were conducted for a great number of years, under the auspices of the Duke of Bedford, gives the following statement of the produce per acre, and the nutritive matter, respectively contained in the several kinds of green crops enumerated, grown on that quantity of land. From which statement, it will strike the mind of the reflecting reader, that such crops, as cattle fodder, must be of paramount value.

MANGEL-WURTZEL, produces upon a suitable soil, or a deep rich loam, on an average 25 tons of green food per acre, every pound of which contains 390 grs. of nutritive matter; and, therefore, per acre, 56,000 lbs. of green food, and of nutritive matter, 3,120 lbs.

CARROTS, produce upon a deep light loam, on an average, 11 tons, every pound of which contains 750 grs. of nutritive matter,—gross produce, 24,640 lbs.—nutritive matter, 2,640 lbs.

POTATOES, produce upon fresh loam, of intermediate quality as to moisture and dryness, on average, 15 tons per acre, affording of nutritive matter per pound, 1,000 grs.—gross produce, 33,600 lbs.—nutritive matter, 4,800 lbs.

THE COMMON FIELD OR WHITE TURNIP, affords from a sandy loam, upon an average, per acre, 16 tons of green food, a pound of which contains 320 grs. of nutritive matter,—gross produce, 35,840 lbs.—nutritive matter, 1638 lbs.

THE SWEDISH TURNIP, or *Ruta-Baga*, produces on a favorable soil, on a strong loam, on an average, 13 tons per acre, a pound weight of which affords of nutritive matter 440 grs.—gross produce, 29,120 lbs.—nutritive matter, 1,830 lbs.

CABBAGES, which delight in a rich strong loam, afford of green food, on an average per acre, 25 tons, every pound of which contains 530 grs. of nutritive matter,—gross produce, 56,000 lbs.—nutritive matter, 3,440 lbs.

Guano—There have been several arrivals during the month, and others are shortly expected, from the Peruvian coast—the supply will probably be greater than the demand for it this spring, it being generally conceded that the application to the wheat crop pays best—but as the agent for the Monopolist Company can control the prices, it is not likely that any material variation from the present rates will take place shortly. Price of Peruvian, \$47 a \$48 per ton of 2000 lbs.—Patagonian, \$37 a \$38.

THE VALUE OF LEACHED WOOD ASHES AS MANURE.

The question has often been asked, whether we would as soon apply leached or spent ashes, as lime? to which we have invariably answered in the affirmative. Sometimes the question has been put to us,—how can leached ashes be of any worth, when the potash is all extracted by the process of leaching? To this our answer has uniformly been, that however carefully the leaching process may have been conducted, there would still be a residuum of potash; that ashes did not solely owe their agricultural value to the quantity of potash contained in them; but that they comprised many other substances of great value in an agricultural point of view. And in order that those who have made inquiries of us, as well as all others, who may feel any interest in the matter, may be apprised of its value, we will give the analyses made by Sprengel of Red Beech and Oak ashes:

	Red Beech	Oak
Silica	5.52	26.95
Alumina	2.33	
Oxide of iron	3.77	8.14
Oxide of Manganese	3.85	
Lime	25.00	17.38
Magnesia	5.00	1.44
Potash	22 11	16.20
Soda	3.32	6.73
Sulphuric Acid	7.64	3.36
Phosphoric Acid	5.62	1.92
Chlorine	1.84	5.41
Carbonic Acid	14.00	15.47
	100.00	100.00

The above analyses give the constituent elements of two kinds of wood ashes before being leached.

Dana, who is the very best authority—who is among the very ablest chemists of the age, in speaking of the agricultural value of *leached ashes*, holds the following views, and gives the *quantitative* and *qualitative* estimate of the constituent elements of a *cord* of wood ashes after they have been leached. The measure of a *cord* contains 103 bushels.

"The agricultural value of ashes, may be determined by reference to these tables. In what state these elements may be combined in plants, we can only determine theoretically thus: the phosphoric acid, by its affinities, would be united in the hard woods as above, with the lime and iron, forming in each 100 parts of the insoluble portion of ashes, phosphate of lime, 5.40; phosphate of iron, 1.86.

"The composition of the insoluble part of ashes gives nearly the constituents of leached ashes. If the soap-boiler's process was as perfect as that which the chemist employs, still his leached ashes would show more lime than the above tables, because he always employs a portion of lime to make his ley caustic. This is a variable proportion; whatever it is, it adds so much to the value of the ashes. Besides, the soap-maker always leaves a portion of alkali, which is combined with the silex. Exposure to air decomposes this, and then the alkali can be extracted by water. This is one great source of the active power of leached ashes."

"A bushel of good ashes contains about 5½ lbs. of real potash. In leaching ashes, generally about one peck of lime is added to each bushel of ashes, and as it loses no bulk during the operation, a *cord* of leached ashes [103 bushels,] contains about the following proportions, allowing the usual proportion to be leached out, or 4½ lbs. per bushel:

Phosphoric acid	117 lbs.
Silex	146 "
Oxide of iron	17 "
" of Manganese	51 "
Magnesia	119 "
Carbonate of lime, including that added in leaching	3,072 "
Potash combined with Silica	50 "

From the preceding it is obvious, that *leached ashes* is a most valuable manure, that, notwithstanding the process of leaching, they contain a sufficient quantity of potash to effectively operate upon the mould in the soil, and prepare it as food for plants—that they are rich in *Phosphoric acid*—a substance indispensable to the formation of all grains as also in the structure of most other vegetable productions—that they are rich in several of those salts which enter into the composition of nearly all plants, and their products, and particularly are they so in *lime*. From the estimate of Professor Dana, it is, obvious, also, that a hundred bushels of leached ashes contains as *much lime* as should at any one time be put on an acre of land, even of good quality, and *more* than should be applied to an acre of poor or exhausted land—it is equally obvious, that the proportion of Phosphoric acid is sufficient for all healthful purposes, and that the same remark will hold good with respect to the quantity of magnesia, oxide of iron, and oxide of manganese, which the ashes contain. Then as a hundred bushels of ashes contains lime enough, besides several other valuable salts which are indispensable to most vegetable products, it follows that ashes are better than lime, when applied in proper proportions. But in the application of ashes, lime, and other alkaline substances, it should never be forgotten, that they comprise, generally, only the *inorganic* part of plants, and, therefore, it is necessary that the soil should be supplied, also, with vegetable and animal manure. If ashes ever fail in the production of good effects, it may be set down as a settled point, that the soil to which they may have been applied, is deficient in *organic* remains, and that, before they can act with efficiency, such substances must be furnished to the land.

EFFECT OF ASHES ON MEADOW LAND.—A premium was awarded by the New York State Ag. Society, in 1849, as we learn from their *Transactions*, to Peter Grispeil, Jr. for the best acre of hay. Although there was no competition, this premium was awarded, he having grown 7.335 lbs. of hay on an acre. This meadow was an old one, having been in grass for more than 12 years, but was ashed over in the fall of 1846, with 100 bushels of *leached ashes* to the acre.

A fact like the above, is worth as many theories as could be pressed into a flour barrel.

E PLURIBUS UNUM is informed, that in making his compost he may dispense with his *lime*; the quantity applied by him last fall is sufficient; but if it was not, there is enough in the ashes he contemplates using; for the lime, however, we would substitute well rotted manure, or wood's mould. Taking his materials for forming the compost, with the exception of the lime, we would form it in the following proportions, viz: 6 parts rotted dung, or wood's-mould, 5 bushels ashes, 2 bushels bone-dust, 1 bushel of plaster, and 1 bushel of salt, per acre; the several substances to be intimately mixed together, and suffered to remain in heap two or three weeks before being used.

CHAPPELL'S FERTILIZER.

To the Editor of the American Farmer:

DEAR SIR—My attention was called to the experiments of Mr. George Rives, published in the December No. page 213. In his experiment he shows that the Fertilizer must have rendered the organic matters insoluble, as the product was not equal to the pieces not manured.

Permit me to ask Mr. Rives, whether he is certain that there was no difference in the composition and location of the three acres upon which these experiments were tried. From my acquaintance with the composition of Mr. Chappell's Fertilizer, and the practical result of my experiments with Guano, Fertilizers, Alkalies, and a variety of Chemical Salts, and stable and chicken manure, until Mr. Rives shows that the composition and location are precisely the same, I am of the opinion he has not done Mr. Chappell or the public, justice.

Yours, with respect,

W. BAER.

We take pleasure in complying with the request of our friends of Queen Anne's, by publishing the annexed proceedings. The portion of the report to which allusion is made, will be found in our last Sept. No., page 95.

DR. HIGGINS AND THE EASTERN SHORE.

CENTREVILLE, JAN. 15th, 1851.

DEAR SIR:—I am requested as the Corresponding Secretary of the Farmer's Inspecting Club of Corsica Neck, Queen Ann's County, to remit to you a copy of resolutions passed at our last meeting, and to say, we would be glad if you would notice the same, in your excellent paper.

Very respectfully, yours,

SAMUEL T. EARLE.

Whereas, it is believed by the members of the Club, that no man has done more to promote the interest of the Eastern Shore counties of this state, by setting forth the ease with which our lands can be improved and cultivated, and disabuse the public mind, as to our unhealthiness, than Dr. James Higgins, State Geologist, in his report to the Legislature; and whereas, it is agreeable to the feelings of the members of the Club, not only to acknowledge, that we duly appreciate his labors, but to inform him of it in a manner we deem most appropriate, therefore,

Resolved, That Dr. James Higgins be elected an honorary member of this Society; that the Secretary be requested to inform him of it by letter, stating our location, names of officers and members, days of meeting and facilities for meeting us, and that it will afford us pleasure individually and collectively, if he will do so, whenever convenient.

By order of the Club,

SAMUEL T. EARLE, Secretary.

COAD WHEAT.—It having been understood that seed wheat has been sold in this city, purporting to be raised by Mr. J. Edwin Coad, of St. Mary's Co. Md., of the variety which has attained so much attention, we are requested to state that Mr. C. has not offered any of his wheat for sale in this market, and consequently, those who may have purchased have been imposed upon.

We are indebted to Hon. Mr. Pearce, of Md., for a copy of the Report of the Secretary of War, communicating information in relation to the geology and topography of California—embracing among a number of interesting papers, the memoir of P. T. Tyson, of this city, on the geology of California.

We have also received from Hon. Messrs. McLane and Bowie, of Md. copies of the mechanical portion of the Patent Office Report, for 1849.

CONSTITUENT ELEMENTS OF PLANTS.

We abridge the following explanations of the various substances which enter into and form the integral parts of plants, from professor Norton's recentable work on "*Scientific Agriculture*." We have done so, because the accomplished author, feeling himself master of the subject upon which he is treating, though compelled to use the words technical to science, has so familiarly described them—given his explanations in language so plain and unpretending, that any reader who may address his mind to that object, can comprehend their meaning, and understand the several offices performed by the component parts, which go to make up the great whole of those vegetable products, which yield to man his sustenance:

"Section II.—PLANTS DIVIDED INTO AN ORGANIC AND INORGANIC PART."

"In endeavoring to explain, in a simple manner, something of this desirable branch of knowledge, we will commence with the plant, and give in a clear connected shape the information that has been collected by the most approved writers and experiments concerning it. Hard words and obscure phrases will be avoided whenever it is possible."

"We commence our examination with some inquiry into the nature of the materials which compose all of our crops. The first result arrived at is the existence of two grand classes of bodies, to one of which, or to a mixture of both, belongs every part of the plant."

"In connection with this fact, there is one peculiarity in all vegetable substances, that early attracts our attention. Whether we take the hard wood, the soft flexible straw, the leaf, or the root, we find that all are more or less combustible. When dry they generally burn readily, and with a flame, but we see at the same time that *all* does not disappear: the stalk of straw or the piece of wood, for the most part burns away; but after the flame has gone out, there is always an ash left. Thus we establish a grand division: one part burns and disappears; another part is incombustible and remains. Chemists have named the part that burns away, *organic matter*; and the part that remains, or the ash, *inorganic matter*."

"Fire, then, is one test, by means of which we distinguish organic from inorganic substances. To the first of these two classes we will now attend."

The name ORGANIC is given, because organic bodies, being products of life, have an organic structure that cannot be produced by artificial means. What is meant by an organized structure may be seen by examining a cross section from the stem of a tree: this will be found to consist of little tubes and cells, all arranged in a regular manner. Under the microscope, a potato will appear made up of cells, having grains of starch contained. So with other plants or parts of plants, they all have an organization that is a product of life, and which we therefore cannot imitate. Inorganic bodies have no such structure, and can in many cases be produced by chemical process."

"Section III. The organic part in plants is by far the largest, as is plainly to be seen on burning any form of vegetable matter. It ordinarily constitutes from 90 to 97 lbs. in every hundred."

During the burning, this solid organic matter disappears: it is driven off into the atmosphere until nothing but a little ash remains; that which has gone, then, has evidently become air. It is easy to see that this part of the plant can only have been

formed from air at first. Such a conclusion may seem very strange at first, but a little reflection will show that we can arrive at no other. When we have made up our minds to this it becomes important to know what kind of air it is that forms so large a part of our plants, or if there is more than one kind.

"Their names are *Carbon, Oxygen, Nitrogen*, and *Hydrogen*."

"The whole of the *organic* part of vegetables and plants. The whole of the atmosphere, all water, and a very large part of the solid rocks which make up this globe, consist of one, two, three, or all of these four substances united in different proportions. These names then stand for bodies of immense importance; and it is very necessary that every farmer should at least know something about them. The three last, *oxygen, hydrogen* and *nitrogen*, we find in their pure state as gases: *gas* is the chemical term for the different kinds of air. The other substance, *carbon*, is found in nature as a solid, and to this we will first direct our attention. *Carbon* is a solid, usually of a black color, and having no taste or smell. All the varieties of carbon burn more or less freely in the air, and, while burning, are converted into a gas called *carbonic acid gas*; this will by-and-by be described."

"One very abundant form of carbon is common charcoal; another is lampblack; others are coke and blacklead: the most beautiful form is the diamond. This, strange to say, though it looks so pure, clear and beautiful, and bears so high a price, does not differ at all in its composition from common charcoal! A diamond can easily be burned by a high heat, and the product of the burning will be *carbonic acid gas*, just as when charcoal is burned. Charcoal seems to be soft; but if the fine powder in small quantity be rubbed between plates of glass, it is found that the little particles are very hard, and able to scratch the glass almost as easily as the diamond itself."

Charcoal has strong disinfecting properties; liquids that are quite offensive in smell, when filtered through it, become pure and sweet. The color is also extracted from many liquids by it. Some of these effects are owing to its power of absorbing gaseous and other substances, itself being full of pores.

Hydrogen, as I have said, is a gas or kind of air. It is transparent, tasteless, colorless and inodorous. As we can not smell, taste or see it, we can only judge of its properties by its action with other bodies. For this purpose it is obtained by putting pieces of zinc or iron filings into water, and then adding sulphuric acid, that is, the common oil of vitriol. About a third as much acid as water should be used. The mixture will soon grow warm, and hydrogen gas will at once commence rising to the surface in little bubbles. * * * The gas will burn when a flame is brought into contact with it. * * * Although inflammable itself, it is not a supporter of combustion. * * * It is much lighter than common air, being the lightest of known bodies. * * * It is often used for filling balloons, its lightness giving them very great buoyancy.

Mixed with common air, this gas is dangerously explosive. * * * This gas can be breathed without very injurious effects, but it will not sustain life: in an atmosphere of pure hydrogen, every animal would soon die.

Oxygen. "The next of these three gases is one of exceeding importance: its name is *oxygen*. It is

colorless, tasteless and inodorous, like hydrogen, that is, when pure: as ordinarily made it has some impurities. The easiest way of preparing it is to mingle some chlorate of potash with a small portion of the black oxide of manganese. Both of these substances can be procured at the shops in our cities and large towns. * So intense is its action as a supporter of combustion that many substances ordinarily incombustible take fire in it, and burn with great splendor."

"It is no less important to the support of life, whether animal or vegetable. Both plants and animals speedily die when introduced into any atmosphere which does not contain it. In five gallons of common air, there is about one gallon of oxygen: when this is greatly diminished, animals die."

"If animals are brought into an atmosphere of pure oxygen, the effect is found to be too powerful: the vital functions are so stimulated as in a very short time to wear themselves out by a kind of fever, all of their powers being made to act with too much energy." * *

"It is much heavier than hydrogen, and somewhat lighter than common air."

"This substance is not only the grand supporter of combustion and of life, but is also the most powerful agent of destruction; for it has a property called by chemists *oxidizing*, that is, of uniting with nearly all other bodies and forming new combinations, leading either to a changed state or to decay. Thus it is not only the promoter of life, but of death and decomposition. * * It forms, as has been said a fifth of the atmosphere; in nine lbs. of water, there are eight of this gas; it exists largely in all plants, and, in combination with various inorganic bodies it constitutes a large proportion of the solid crust of our earth. We meet it in all places, and see its effects on almost every known body."

Nitrogen. "The last of these four most important organic substances, is *Nitrogen*. * Common air, or our atmosphere, has been stated to contain one-fifth of oxygen; the remaining four-fifths are nitrogen. * * It does not support combustion: a lighted taper, plunged into it, is extinguished instantly. It does not burn itself, but remains unaltered after contact with flame. It is a little lighter than atmospheric air. * * * It will not support vegetation alone, and animals soon die when placed in it. They do not seem to suffer from any active poisonous influence, but from a species of suffocation as in water."

"This gas is admirably adapted to the purpose which it serves in the atmosphere, of tempering the too great energy of the oxygen. Being incapable of burning or supporting combustion, it prevents the general conflagration which would occur in pure oxygen, and also reduces its strength to the proper proportions for sustaining animal and vegetable life, without bringing in any poisonous or deleterious influences, as many other gases would do."

INORGANIC PART OF PLANTS.

"It will be remembered, that although by far the larger portion of the plant disappears when fire is applied, there is always something remaining called the *ash*, or, as has before been explained, the *inorganic* part. This name *inorganic* was given to denote a striking difference between these two great classes of bodies, the *organic* and the *inorganic*: the one being products of life and living organs; the other only taken by the organs to answer certain purposes, not having been formed by them, and not like them liable to quick destruction."

"This ash constitutes so small a part of all living plants, that it was for a long time thought to be a species of accidental impurity; but after a time, it was found that certain substances were almost always present in the ash of every cultivated plant. The ash of the same plant, grown on different soils, was found to have a composition of nearly the same nature; thus showing that it did not take in indiscriminately every thing that might come in contact with its roots, but had a certain power of selection.

The inorganic part of plants, "are named as follows: Potash, Soda, Lime, Magnesia, Oxide of Iron, Oxide of Manganese, Silica, Chlorine, Sulphuric Acid (Oil of Vitriol,) and Phosphoric Acid."

Potash is well known as the extract by water from wood ashes, boiled down to dryness. It attracts moisture from the air when strong, and, if touched by the tongue, causes an acrid burning sensation called by chemists an *alkaline taste*. Potash is quite abundant in plants: more so in some classes than others. It is injurious to some kinds of weeds, or at least is used to extirpate them by bringing in better kinds."

"Soda. We do not often see this substance by itself, but almost always in combination with other bodies. Some of the more common of these are, Carbonate of Soda, that is, the common washing soda of the shops; and Chloride of Sodium, that is common salt. Both of these compounds contain a large proportion of Soda. It is white, and when pure has the same attraction for water, the same caustic and burning taste, as potash; in fact the two are much alike in many of their properties, and also in the purposes which they seem to serve in plants.

Lime. As every body knows what lime is, we shall not copy the professor's explanation.

Magnesia. As there is the same familiarity with this earth as with lime, we shall not transcribe the definition in full: he concludes thus:

"Epsom Salts, so much in vogue as a medical prescription, is another compound of magnesia. When burned, magnesia has something of the caustic properties of lime, but not by any means to the same extent. It is a constituent of many rocks, and particularly of one class of limestones, hence called magnesian limestones, or sometimes dolomites. Although magnesia is necessary to plants, it is found that too great a quantity of lime made from these dolomites is decidedly injurious to crops."

Iron. After describing what Iron is, in its metallic state, and its tendency to oxidation by uniting with oxygen, he remarks: "There is more than one oxide of iron, but that which is usually found in plants, and which is commonly known under the name of iron rust, is called by chemists the peroxide of iron, this is to distinguish it from another oxide, to which we shall have occasion to allude in a subsequent chapter. From such a distinction being made, the inference will naturally and correctly be drawn, that the oxygen and the iron unite in definite proportions: a certain quantity of oxygen, to form the per-oxide; if the proportions are altered, we have some other oxide. Where, however, there is an abundance of oxygen, it is always the peroxide that is formed: hence we invariably find this oxide on exposed iron surface, and in plants.

Oxide of Manganese. "The substances hitherto described have all been those that are found quite abundantly; but that which is now to be mentioned, the Oxide of Manganese is more rare. Many species of our cultivated plants are found to be without it in their ash, far more often than with it;

and when it is present in the soil, we can not, from any experiments hitherto made, see that their growth is more luxuriant. In some trees it is said to exist abundantly; but for the ash of our cultivated crops generally, I am inclined to think that it can scarcely be considered an indispensable constituent. Manganese is a metal somewhat resembling iron but much less abundant. It also is always found in some compound form, never as a pure metal. It forms oxides with oxygen; and one of these, the black oxide, is of much value in certain manufacturing processes. For these purposes, it is mixed whenever it is found in large quantity."

Silica. As every farmer knows that this is Sand, it is unnecessary to copy the professor's definition.

"Chlorine is a kind of gas. It is easily prepared by mixing a little muriatic acid with some of the commercial black oxide of manganese, a gentle heat being applied, chlorine is given off." The sense of smell should be tested cautiously in this case, as the gas has a most suffocating and distressing effect when inhaled even in small quantity. "It unites with soda and forms common salt."

Sulphuric Acid is the common oil of vitriol. This acid is found in a state of combination with some other substance. "In some of these forms of combination, it is very abundant. One of them and an important one to the farmer, is gypsum, or plaster of Paris. This, as is well known, is a solid, and has no acid taste: it however consists of sulphuric acid united with lime, forming what is termed by chemists Sulphate of lime. In every 100 lbs of plaster of Paris are about 33 lbs. of Sulphuric acid, 46 lbs of lime and 21 lbs of water."

"Epsom salts consist of Sulphuric acid and magnesia; alum, of Sulphuric acid, alumina and potash. "Sulphuric acid is made by burning Sulphur (brimstone) with certain precautions, in large leaden chambers."

Phosphoric Acid. "Not less important is the next body on our list, phosphoric acid. It is also very sour, and is usually seen as a white powder. If a stick of phosphorus is burned, white fumes are seen to rise in large quantity. The phosphorus unites while burning with the oxygen of the air, and forms phosphoric acid. If these white fumes are passed through water, it will become sour, as it dissolves the acid: they may also be condensed on a cold glass plate.

This body can be shown in a yet simpler manner by burning a common locofoco match; the white smoke which goes off at first before the sulphur ignites, is phosphoric acid. Phosphorus is used in the making of these matches, because it is a substance that inflames easily by a little friction. All who have rubbed them on a wall or board in the dark have observed that they leave a quite bright luminous trace distinctly visible. If the match fails to ignite, the end of it will also appear bright, and the peculiar smell of phosphorus may be perceived.

Phosphoric Acid does not seem to exist in so large quantity as Sulphuric acid, as it does not constitute a principal portion of any of our rocks. It forms a very important part of the bones of animals."

BOOK AGENTS.—We refer those wishing to under take the sale of valuable Agricultural Works, to the advertisement of Jewett & Co., in this No. of the Farmer, and to that of Derby & Miller, in our last. The works are all of the most saleable kind, and a good business could be made by active and suitable men.

REVIEW OF THE TOBACCO & GRAIN MARKETS.

Reported for the American Farmer by J. W. & E. Reynolds.

With the exception of about one thousand bbls. Md. Tobacco sold to houses in Alexandria, the transactions in the Tobacco market for the past month has been very limited—The stock now on hand is very small, and is firmly held at high prices—We anticipate some activity in the market this month, as shipments will soon commence, and from the last accounts from Europe, we see that the stock there held by merchants is much less than it has been for many years, together with the demand which will continue for home consumption, we can see no reason why we should not have an active market with good prices.—We quote common dark crop and second at \$6 a \$6½; middling to good crop \$7 a \$7½; good to fine \$8 a \$10; Ground Leaf \$5½ a \$10, as per quality.

Wheat—Red, 90c a \$1.03; White \$1 a \$1.06, and for family flour, \$1.08 a \$1.15.

Corn—Yellow 58c. a 60c.; white 62c. a 64c.

Rye, 70c. a 75c.; Oats 40c. a 47c.

Coffee, Rio, 11 a 11½c.—Cotton, sales this week of 438 bales Va. and Upland, from 12½c cash, to 15c, 6 mos., and 56 bales N. O. mid. fair, 15½c 6 mos. Flour, How. st., Sus. and City Mills, \$4.56 a 4.62½.—Rye Flour, 1st Pa., \$3.62½.—Corn Meal, Balt., \$3 per bbl.; Pa. \$2.75.—Cloverseed, \$5 a 5.12; prime \$5.25 per bush.—Timothy, \$3 per bushel—Flaxseed, \$1½ do.—Molasses, N. O. 32c., Havana, 23c.—Sugar, N. O. \$6 a 7.—Whiskey, Pa. bbls. 25½ a 26c; Balt. rec. 26.—Wool, mixed grade, principally fleece, 40c.; pulled 32 a 33½; unwashed 23 a 25; tub washed 33 a 36c.—Lime, Agricultural, 6c. deliverable in Baltimore.—Bone Dust, 50 a 55c. do.—Beef Cattle, 12½ a 3¼ per 100 lbs. on hoof, equal to \$5 a 7¼ net, and averaging \$3.12 gross—800 head offered last sale day, of which 300 has gone to Philad. and 50 left over—Hogs, sales brisk at \$5¼ per 100 lbs.

CHAPPELL'S FERTILIZER.

REMOVAL.—The subscriber has removed his Office to No. 158 Lombard street, between Hanover and Charles streets.

He will be prepared to present, at a proper time, additional testimony to that heretofore published, showing the great advantage derived from the use of his Fertilizer, on Wheat, Corn, Potatoes, &c.; also some evidences of its superiority over Guano or other manures as an improver of the soil.

Feb. 1-1f

No. 158 Lombard street.

Oil Vitriol, or Sulphuric Acid.

THE undersigned, being largely engaged in the Manufacture of Oil of Vitriol, is prepared to furnish it to farmers for dissolving bones, put up in strong Carboys, at lowest price for cash or town acceptances.

P. S. CHAPPELL.

Feb. 1-1f

No. 158 Lombard street.

BONE-DUST AND POUDRETTE ESTABLISHMENT.

On Harris' Creek, at Canton, Baltimore.

THOMAS BAYNES, continues the manufacture of **POUDRETTE**, and is prepared to supply any orders for the same.—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His **BONE-DUST** weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 55 cents per bushel. Poudrette, \$1.12 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 90 cents per bushel.

J. W. & E. REYNOLDS,
FARMERS AND PLANTERS' AGENTS,

Light street Wharf, Baltimore.

KEEP constantly on hand a carefully selected stock of **FAMILY GROCERIES**, in order to furnish their customers at the lowest rates and on the best terms. They also furnish (on a credit of 9 months) Guano, Lime, Ashes and Salt, for agricultural purposes, at the lowest prices. Sept-1f

DR. HIGGINS,
State Agricultural Chemist.

RESPECTFULLY informs the citizens of the Government District, that he has permanently located his LABORATORY, at No. 78 N. EUTAW STREET. The different neighborhoods in the several counties will be visited as heretofore, and the usual Lectures delivered, of which due notice will be given.

It must be perfectly manifest to every reflecting mind, that the great waste of time, and destruction of valuable and delicate Apparatus and Reagents attendant on the frequent repacking and removal of the contents of a Laboratory, afford a good reason for its establishment in the most accessible position, and the superior facilities afforded by its permanent location will prevent the apparent neglect of samples that has sometimes necessarily occurred in removing the Laboratory from place to place. The examination of the specimens of soils under further notice, will be confined to those from Howard District. Marble and Lime stones will be examined from any part of the State, or from any source whence they can be used in the State.

Persons sending specimens of soil will take it from the top to the depth of cultivation so as to give an average specimen of the variety of soil to be improved.

Dig a hole with a clean spade through the surface soil, and take a slice of the soil of uniform thickness from the top to the bottom of the hole; do this in several different places on the same kind of soil—mix the several samples, wrap or pack them up carefully and send them as above. The name and locality should be distinctly written on the several specimens, the productiveness, situation, and indeed every fact in relation to the same should be communicated.

Mr. S. Sands, of the American Farmer, has kindly consented to receive specimens intended for examination.

Having received numerous communications from persons out of, and many solicitations from persons within the State to make examinations of certain things not included in the line of my duty, for a fee, which in no case I could receive, I now inform the public that I will have examinations made of all substances, whatsoever, and be responsible for their correctness on proper compensation being made. Feb. 1.

SEEDS, TREES, PLANTS, &c.

JOHN FEAST,

Florist and seedsman,

279 W. Lexington st., cor. of Pine, Balto.

Offers for sale on the most reasonable terms, a large collection of GREENHOUSE PLANTS, as Camellias, Roses, Azaleas, Geraniums, Fuchsias, and new Verbenas; also the newest and best Dahlias, of superior beauty and form, which have taken prizes wherever shown last year. Also, FRUIT and ORNAMENTAL TREES and PLANTS, Shrubbery, Bulbous Roots, Herbaceous Plants, and Creepers, Grape Vines of the best sort, Sea Kale Roots, Victoria Rharbarb, Cabbage, Cauliflower, Broccoli, Tomatoes, Egg Plants, and all others in season for planting.

Cut Flowers for parties, or Bouquets, to order.

He has always on hand a choice stock of GARDEN and FLOWER SEEDS, imported and home growth, which will be found, on trial, to be genuine—and he invites those wanting seeds to call on him, where they may depend on obtaining articles in which they will meet with no disappointment, and on the lowest terms for cash or satisfactory references.

—Gardeners furnished to those wanting them. Feb. 1 4f

CHICKERING'S PIANOS.

THE Subscriber is Sole Agent in Baltimore, for the sale of CHICKERING'S CELEBRATED IRON FRAMED GRAND AND SQUARE PIANO FORTES, and is constantly receiving supplies from the factory in Boston, which are sold at the same prices as charged by Mr. Chickering.

Chickering's Pianos are unquestionably the best Instruments manufactured in the United States. In regard to superior quality of tone, touch, durability, and all the essential qualities of a Piano, they are admitted by the most eminent Pianists to be equal to Erard's, of Paris, or Broadwood's, of London.—Although there are several factories in Boston and New York of high reputation, Mr. Chickering undoubtedly stands at the head, possessing eminent talent, skill, untiring industry and experience of some 35 years as a manufacturer of pianos, with abundant means to enable him to carry out his plans in producing the very best instruments.

Orders from the country, untrusted to the subscriber, either for Pianos, Music, or any article in his line of business, will be faithfully executed.

Jan 1 6f

F. D. BENTEN.

181 Baltimore street.

MORE & CHAMBERLAIN or **DELAWARE FLOWERS**, constantly on hand and for sale, wholesale and retail, at manufacturers' prices, by E. WHITMAN, JR. & CO.
Dec. 1 55 Light street, Baltimore.



CO-PARTNERSHIP.

E. WHITMAN, JR., has this day associated with him in the AGRICULTURAL IMPLEMENT BUSINESS, **Mr. E. W. ROBINSON**, and from this date the business will be conducted under the firm and style of **E. WHITMAN, Jr. & Co.**, at the old stand, No. 55 Light street.

E. W. Jr. & Co. would inform the Farmers and Planters of the South and West that their stock of Agricultural Implements, Seeds, Fertilizers, &c. this season will embrace the largest and best assortment ever offered in this city, and respectfully solicit their patronage.

Baltimore, January 1, 1851.

E. W. ROBINSON would take this method of returning thanks to his friends and the public generally for their kind and liberal patronage for the last fifteen years, and would inform them that by this association with **Mr. E. Whitman, Jr.**, he does not discontinue his former business until all contracts and work now engaged shall be finished and completed.

Jan. 15.

E. W. ROBINSON.

THE BEST AND MOST VALUABLE Agricultural Implements and Machinery exhibited at the State Fair in 1850, will be seen by the award of Premiums below :

AWARDED TO E. WHITMAN, JR.

No. 55 Light street, Baltimore,

BY THE

MARYLAND STATE AGRICULTURAL SOC'Y,

At their Third Annual Fair, held in Baltimore, 23d, 24th and 25th October, 1850.

For the best Plow in the Plowing Match, the Prouty & Mears, No. 5½,	\$10 00
For the best Plowing, with Ox Team, same Plow—Special Premium,	2 00
For the best Plow on Exhibition, Ruggles, Nourse, Mason & Co's No. 3, 1st Premium,	8 00
For the best Railway Horse Power, Whitman's Improved, 1st Premium,	15 00
For the best Hay Press, 1st Premium,	25 00
For the best Corn Sheller, the Virginia pattern, improved by E. Whitman, 1st Prem.,	4 00
For the best Field Rollers, 1st Premium,	8 00
For the best Corn Stalk Cutters and Grinders, 1st Premium,	5 00
For the best Churns, 1st Premium,	4 00
For the best Hay and Manure Forks, do	2 00
For the best Hay Rakes, do	2 00
For the best Cultivator, do	4 00

Also, for the best Wheat Fan, was awarded the Society's Highest Honors, a Certificate of pre-eminence over all others.

No exhibitor of Agricultural Implements at the above named Fair, having received one-half the amount of Premiums

awarded us on the different kinds of Implements and Machines, it is conclusive evidence that ours was considered the BEST AND MOST VALUABLE on exhibition.

At the great **FAIR OF THE MARYLAND INSTITUTE** for the Promotion of the Mechanic Arts, held in Baltimore in October and November, 1850, the **FIRST PREMIUM**, a heavy Silver Medal, WAS AWARDED TO

EZRA WHITMAN, JR.

FOR THE LARGEST AND BEST DISPLAY OF AGRICULTURAL IMPLEMENTS.

Also, **FIRST PREMIUM**, (another Silver Medal,) for his Improved Wrought Iron Railway Horse Power, which was made for Exhibition at the **WORLD'S FAIR**, in London, May, 1851.

Our stock this season will be the **LARGEST** ever offered in this city, and probably the largest in the World, consisting of more than 8000 PLOUGHS, 250 Threshing Machines, 1000 Wheat Fans, 1000 Corn Shellers, 500 Straw Cutters, 500 Cultivators, Reaping Machines, Wheat Drills, Corn and Cob Crushers, Burr stone Mills, Cider Mills, Hay and Cotton Presses, together with every article which a farmer or planter could wish, in the prosecution of his pursuits, all of which will be sold on reasonable terms at Wholesale or Retail.

E. WHITMAN, JR. & CO.

At the Old Stand, No. 55 Light street, Baltimore, Md.

A. G. MOFF.

AGRICULTURAL IMPLEMENT MANUFACTURER.



No. 38 Euseb street, near the Belair Market, Baltimore. Plows, Cultivators, Harrows, Wheat Fans, Straw Cutters, Grain Cradles, and all of the best and most approved Agricultural Implements in use.

AGENT for the celebrated N. York Wiley and Empire Plow Castings.



C. H. DRURY, Hollingsworth street corner of Pratt—Head of the Basin

—having completed his establishment with Foundry connected, for the making of all varieties of **AGRICULTURAL IMPLEMENTS and CASTINGS**, made to pattern of the best material.

The following is a list of PLOWS kept constantly on hand: Davis, of the different numbers, for wrought and cast shears, S. & M., Chenoweth, Wiley, 3 and 3 furrow, No. 0, Hill side, No. 1 and 3 Connecticut—Bench Improved or Possey Plow, with common Davis cast shear—Self-sharpener or wrought shear—Corn Cultivators, plain and expanding—Tobacco do.—Wheat Fan—Corn shellers with double hopper—Old Vertical and Virginia sheller—Harrows—superior Pennsylvania made Grain Cradles—Revolving Horse Rakes—Cylindrical straw Cutters, &c. &c. Horse Power **GRIST MILLS**, a very useful and saving article, and coming into general use. **HORSE POWER AND THRESHING MACHINES**, of these I need not say any thing, as wherever they have been in use any time, they are preferred to all others.

C. H. D. will this year make a smaller size Power & Thresher, (price of Power, \$100, Thresher, \$50, Band, \$10, or when taken together, complete, \$150 cash.) Persons in want of Implements made of the best material, and put together in the strongest and best manner to answer the purpose for which they are intended, are invited to call on the subscriber. **JEI**

GUANO.

PERUVIAN, of the latest importations, per Kirkland & Jno. G. Coster. Also, Patagonian, No. 2 and 3, warranted equal to any in this city. Also, Ground Plaster in barrels. For sale by **S. FENBY & BRO.** Corner Gay and Pratt street.

BONE MILLS.

The subscriber is now manufacturing **MILLS** for the grinding of Bones, which he believes are better for the purpose than any other now in use—they will grind 300 to 400 bushels dry bones per day—they can be propelled by horse or other power—Price \$150. For further particulars apply to the subscriber at his manufactory at Ellicott's Mills, Howard Cir. Md. where the mill can be seen in operation.

Jan 1-3

GEORGE POE.

AGENCY FOR THE PURCHASE AND SALE OF IMPROVED STOCK—Stock Cattle of the different breeds, Sheep, Swine, Poultry, &c. purchased to order and carefully shipped to any part of the United States—for which a reasonable commission will be charged.

All letters, post paid, will be promptly attended to. Address

AARON CLEMENT.

Sept

Cedar st., above 9th, Philadelphia.

GREAT BOOKS FOR FARMERS, GARDENERS AND HOR- TICULTURISTS, AND A RARE CHANCE FOR AGENTS TO MAKE MONEY.

JOHN P. JEWETT & COMPANY, Publishers, Nos. 17 and 19 CORNHILL, BOSTON, take pleasure in announcing to the intelligent Farmers, Gardeners, and Horticulturists of the United States that they have at length completed their valuable collection of works on Agriculture, and its kindred sciences, and that the two last of the series are now in the hands of the stereotypers, and will be ready for delivery to subscribers and others on or before the first day of March. The two volumes now in press are, first,

Breck's Book of Flowers,

By Joseph Breck, Esq., of Brighton,

For many years editor and publisher of the "New England Farmer," and one of the most distinguished Florists in America. This volume contains the results of the practical experience of a man of taste and science, and, without doubt, the most thorough and reliable book on the cultivation of Flowers and laying out of Flower Gardens, to be found in any language; it is emphatically the Ladies' and Gentlemen's complete Floral Vade Mecum. This book will be in 12mo. form, containing 339 pages, fine cloth binding, and we have determined to sell it at 75 CENTS, to bring it within the means of all, and to ensure a large sale; as it is a book which every lover of Flowers must own.

The second in the series is—

The Kitchen Gardener's Text Book,

By one of the most distinguished Gardeners of New Jersey.—This is truly a practical work, avoiding useless and to the masses, unmeaning technicalities, the author handles his subjects with the skill of a thoroughly versed, common-sense practitioner. With the aid of this volume the merest Tyro may rapidly advance through the various stages of Horticultural knowledge, to complete success. A simple and practical and cheap work on this subject has long been needed. The price of this book will be 50 CENTS,—12mo., 216 pages, handsomely bound in cloth.

The third book is—

A Treatise on Hot-Houses,

By Robert B. Leach, Garden Architect,

This work, by Mr. Leach, who is among the most distinguished among the many Scotch Gardeners of America, is a practical treatise on the

CONSTRUCTION, HEATING & VENTILATION OF HOT-HOUSES, INCLUDING CONSERVATORIES, GREEN-HOUSES, GRAPES, and other kinds of

HORTICULTURAL STRUCTURES,

with practical directions for their management in regard to LIGHT, HEAT and AIR. Illustrated with more than SEVENTY ENGRAVINGS. This is the first and only work of the kind ever published in this country or in Europe, and is recommended very highly by professors Sullivan and Dunn, of Yale College, and by many other scientific gentlemen. Price ONE DOLLAR. It is a very learned work, and an invaluable one to any person who owns, or who intends to erect, either of the structures upon which it so ably treats.

The fourth book is—

Mr. Cole's Great Work on

THE DISEASES OF ANIMALS, OR THE AMERICAN VETERINARIAN,

30,000 copies of which have already been sold, and the sale of which continues in a manner almost without a precedent. To every man who owns a horse, a cow, a pig, or even a hen, this work by Mr. Cole is of more value than ten times its cost.

The lives of many valuable animals have already been saved by following Mr. Cole's plain directions for their treatment when sick. This is the cheapest work of the kind ever published in America, being but 50 CENTS at retail, and we do not believe that any farmer would willingly be without it, if placed within his reach.

The fifth book is—

Mr. Cole's other Valuable Work,

THE AMERICAN FRUIT BOOK,

—OR, FRUITS AND FRUIT TREES OF AMERICA,
—18,000 of which have been published in less than two years. This valuable and thorough work is illustrated by over 200 engravings, of Apples, Pears, Peaches, Plums, Cherries,

Grapes, Raspberries, Gooseberries, Currants, &c. &c., and the various Fruit Trees of our country; also, cuts representing the various modes of training vines, and the different styles of grafting, budding, pruning, &c. It is a work which, for accuracy of description and reliability, has never been exceeded, if equalled, and contains more than twice the amount of matter of any other Fruit Book published in America at the same price, viz: 50 cents. We could fill a volume with the recommendations of Mr. Cole's two books, which we have received from the most eminent Farmers and Horticulturists of New England, the Middle States, and the great West.

A WORD NOW TO AGENTS.

We are now prepared to offer to capable, responsible and energetic Book Agents a chance for making money, such as seldom occurs. With the above five works, an Agent of tact or ability could hardly fail upon a spot so barren that he could not dispose of one or more of these works, and in many cases would sell one of each; and in populous districts, a large number of copies could be sold daily. We intend to restrict out the New England States, mostly into counties. Also, the States of New York, Pennsylvania, New Jersey, Ohio and the Western States, we should prefer to dispose of to some one individual in each State, for him to restrict out into sub-agencies.

The books will be ready for delivery by the 1st. of March, and it is important that the various Counties and States should be disposed of before that time. A cash capital from \$30 to \$50 will be needed by every Agent for a County, and as much larger sum by a State Agent.

Address, post paid, the Publishers,

JOHN P. JEWETT & CO.,
17 & 19 Cornhill, Boston.

Feb. 1-11.

DUVALL & IGLEHART, GROCERS AND COMMISSION MERCHANTS, No. 78 LIGHT STREET WHARF.

Invite the attention of their friends, and the public generally, to their large and general assortment of GROCERIES, embracing every article in that line of business, and which they will sell upon pleasing and liberal terms, and at the lowest prices. Any one in want of any article in their line will find it to their advantage to give them a call. They will also pay particular attention to the sale of all kinds of produce.

GROUND CHARCOAL.—An excellent article for Manuring Peach and other Fruit Trees, and for other purposes.—Price, \$1.50 per barrel.

PREPARED GUANO.—This cheap and durable Fertilizer, at \$20 per ton, will be found invaluable, if used as a top-dressing generally. It kills the fly, insects, and the mole, and prevents potatoe and all other rot, rust and mildew.—For sale by the only manufacturer,

CHAS. A. KENTISH, 40 Peck Slip, New York City.
Jan. 1-31

FOR SALE.—Thorough bred Durham Cattle and Grade.

" " Alderney " " "
" " Ayrshires. "
South Down Sheep.
Oxfordshire do.
Poultry of the various breeds.
Swine, &c. &c.

Apply to AARON CLEMENT, Agent for the purchase and sale of improved stock.
Philadelphia, Jan. 1850. Jan. 1-31

WILLIAM HARRIS.



GUN, RIFLE AND
PISTOL MAN-
UFACTURER, No. 63
South st., 1 door from
Pratt st., Baltimore.

W. H. keeps constantly on hand a large assortment of Bird and Pucking Guns, (double and single barrel) Six barreled Revolvers; Rifles made to order; Dupont's Gunpowder; Powder Flasks; Bird Bags; Shot Belts and Pouches, and many other articles necessary for Sportsmen. Repairing done at the shortest notice, and with neatness. Dec. 1-6m

GROUND PLASTER.

THE subscriber respectfully informs the Farmers and Planters that he is now receiving a large and selected lot of an extra quality of Lump Gypsum, direct from particular mines, (the purity of which he has had tested by various analyses) from which he is manufacturing a superior article of Ground Plaster, warranted pure, and each barrel of full weight and in good shipping order—marked with his own name. For sale on the most favorable terms.

Steam Plaster Mill, G. Hughes st., on the Ra-
Orders received at CAPT. ASA NEEDHAM'S STORE, No. 101
Light street wharf. Sept 11

HAMBLETON & DIDIER,

No. 57 Calvert street, and 57 Cheapside,
near Pratt street, Baltimore.



We would call the attention of our friends and the public generally, to our collection of Implements, composed of the best material and workmanship combined with the most modern and improved designs.

We have on hand, and are daily adding to our stock almost every article wanted by the farming community, among which may be enumerated the following.

OUR PREMIUM THRESHING MACHINE, with recent improvements, which received Three First Premiums at the Talbot Co. Cattle Show, held in Easton, Nov. 1850, where all the most improved machines were in competition.

HORSE POWERS.—Of these we have various sizes and patterns, both Lever and Endless Chain. The lever power varies according to size and pattern, from \$75 to \$130—the Rail Way, or Endless Chain Power, one Horse Power, price \$75—two Horse Power, \$100.

STRAW CARRIERS which received the first premium at the Talbot Co. Show, 1850; price, \$15, \$18 and \$20.

PREMIUM WHEAT FANS.—Such are the improvements which we have adapted to this great labor saving machine, that it now stands a "ne plus ultra." It will be remembered that this is the Fan which received the First Premium at the 3d Annual Cattle Show held in Baltimore, 1850. Price \$25 to 30.

STRAW CUTTERS.—We have on hand a great variety of these articles, embracing the Cylindrical Box, an excellent article for general farm purposes. Price 25 to \$40. Ruggles, Noorse, Mason & Co.'s Raw Hide Repeating Hay and Straw Cutter, from \$8 to 30.

Smith's Straw and Stalk Cutter. Price \$10.

CORN SHELLERS of all the most improved varieties, varying in price from \$3 to 30.

CORN AND COB CRUSHERS.—Of these, we have two varieties; one an excellent article for farm purposes—the other intended for breaking the cob sufficiently for Mill Burns. Price \$30.

Corn Mills for horse power, and warranted equal, if not superior to any similar article ever offered to the public. Price from \$55 to \$125.

Harrow of all kinds and varieties. Price from \$5 to 90.

Cultivators made with cast iron and steel teeth, expanding or plain. Price from \$4 to 6.50.

Vegetable Cutters, for cutting Beets, Pumpkins, &c. This is a very useful article, and should be in the possession of every stock feeder. Price \$15.

Iron Rollers of various sizes. Price from \$35 to 60.

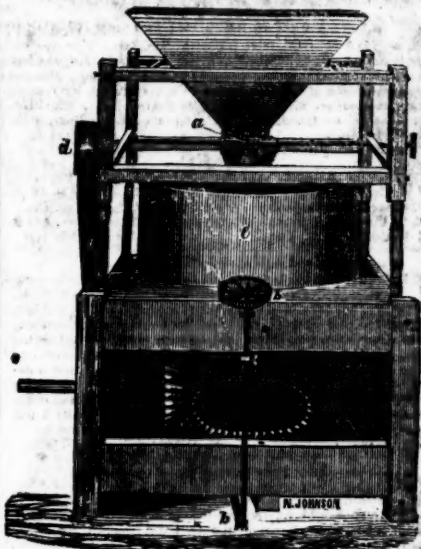
PLOUGHS.—We are constantly manufacturing and receiving all the most improved and valuable Ploughs, suitable for every section of country; among which is the *Premium Delaware Plough*, which for beauty of model, construction and workmanship, cannot be surpassed; at the same time combining great strength, durability and economy than any other similar article. Also, the Deep-Tiller, a Plough well adapted for the deep ploughing so universal among the leading agriculturists, and from the peculiar form of the mould, its draught is made light and easy.

Sausage Cutters and Stuffers.—These articles, intended for cutting and stuffing sausage meat, should be in the possession of every lover of good sausage. They are both light and portable, and will cut, with a small boy, easily 60 lbs. per hour.

We respectfully request our friends and the public generally, to give us a call before purchasing, as we are determined to sell on the most reasonable terms.

HAMBLETON & DIDIER,
No. 57 Calvert st. and 57 Cheapside,
near Pratt street, Baltimore.

Dec. 1

SINCLAIR & CO'S. CORN MILL.

THE above figure shows the construction of **SINCLAIR & CO'S CORN MILL**, which received the First Premium at the late Talbot Co., Md. Agricultural Fair, and also the highest meritorious report by the Prince George's Agricultural Society, held last October. They are generally made with 30 inch French Burr and Cologne Stones, which gives the best surface for making good corn meal and for rapid performance. They are also equally valuable for grinding chop for feeding stock, buckwheat, &c.

At the Maryland State and other late Agricultural Fairs held in this State, they were driven by four large horses, applied to our best Sweep Horse-Power, and ground full seven bushels of corn meal per hour; our estimate, however, of their capacity, is 4 to 7 bushels—quantity ground depending on circumstances, amount of power applied, &c. To be more definite (as regards power required to work a 30 in. Mill) we remark that it requires about the same or less than an ordinary size Threshing Machine.

Price for the 30 in. French Burr Stone Mill, \$135
do do Cologne do 110

Price for Sweep Powers suitable for the above, also for Threshing, &c., 100 a 135

Also for sale, our *Premium Corn and Cob Crushers*, an excellent and simple machine; grinds with light draught 7 bushels of corn and cob per hour. Price \$30.

The same machine, with fixtures for grinding corn for feeding stock, \$32.

Small cast iron (Negro Hominy) Mills, \$9 a 10.
Single and double iron spout hand power Corn Shellers, \$10 a 16.

Vertical or *Negro's Own Corn Sheller*, \$16.
Cylindrical or Virginia Corn Shellers, for hand or horse power—best for medium or large crops. Price \$30.

Goldborough's Corn Sheller and Husking Machine \$40.
Smith's Patent Columbiad ditto, 55.

Cylindrical Straw Cutters, 4 sizes, and no doubt the best straw, hay and fodder Cutter in the U. States. Price \$25, 30, 37 and 45.

Same Machines, with Corn-stalk Lacerators and Grinders attached—\$36, 45 and 55. At these prices, the Cylindrical Straw Cutters combine all the machinery necessary for cutting as well as putting the corn-stalk in fine feeding order.

Vegetable Cutters. Price \$15 a 20.

Sausage Cutters, cutting 75 a 100 lbs. per hour. Price \$7.50 a 10.

Sausage Stuffers; \$5 a 6.

Cast iron Cauldron and Furnaces, for boiling food for stock and other farm purposes. Price \$15 a 25.

Rogers' Corn-stalk Cutter and Grinder. Price \$30.

For particulars see our Catalogue for 1850.

S. SINCLAIR, JR. & CO.,
No. 63 Light street.

Dec. 1

New York Agricultural Warehouse and Seed Store.

A. B. ALLEN & CO., 129 & 131 WATER STREET.
 A NEW YORK, have constantly on hand, the most extensive assortment of the best and latest Improved Agricultural and Horticultural Implements, and Field and Garden Seeds ever offered for sale in the United States, embracing every Implement, Machine, or Seed desirable for the Planter, Farmer, or Gardener. Also, Guano, Bone Dust, Plaster, &c. Feb. 1-3t

GUANO.

WE are in daily expectation of arrivals of Peruvian Guano. Those wishing to order, will do well to do so at the earliest moment. **A. B. ALLEN & Co.**
 New York Agricultural Warehouse and Seed Store, 129 & 131 Water st. New York. Feb. 1-3t

LIME—LIME.

THE undersigned having purchased of E. J. Cooper the most extensive Lime Burning Establishment in the State, is now prepared to supply Agricultural and Building LIME, of superior quality, to farmers and others, on accommodating terms, from his Yard, at the City Block, or delivered at the several landings on the Chesapeake Bay and its tributaries, and pledges himself by strict attention and punctuality, and a determination to do justice, to merit a liberal share of patronage. Any orders addressed to him through the Baltimore Post Office, or left with C. W. BURGESS & Co., No. 60 South street, one door above Pratt, will be promptly attended to. Feb. 1-ly* **JAMES L. SUTTON.**

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with **WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.**

ft FELL & ROBINSON, City Block.

AGRICULTURAL IMPLEMENT DEPOT And Produce Store,

No. 95 LIGHT STREET WHARF,

And in front of the small wharf where the Hugh Jenkins, Cambridge and other steamboats start from daily.

TO facilitate and render this business more convenient for his customers and himself, the subscriber has taken a convenient and commodious Warehouse in Baltimore, as a depot and sale place for all the various Agricultural Implements manufactured at his shops in Carroll County; also, to sell the products of his Farms, Mill and Foundry.

The following articles of his own manufacture and produce, he will endeavor constantly to have there for sale, viz:

HORSE (Endless Chain or Tread, for 1½ or 3 horses.
POWERS { Levers or 2, 4 or 6 horses.

{ With Separator and Fan attached.

THRESHERS { With Separator only.

{ Without Separator.

Wheat Fans, Corn and Cob Crushers, Corn Shellers of various kinds, (very superior); Cutters for Hay, Straw and Fodder, (Richardson's patent); Cornstalk Cutter and Grinder, (a new and the best article now in use); Horse Rakes; Smut and Garlic Rubbers, (which is unequalled for its simplicity of structure and thorough operation on Wheat or Buckwheat); Clover Seed Hullers; Floughs of several kinds, but only such as are known to do the best work; Harrows and Cultivators, and various smaller Implements for Garden and Field use. Castings for Blacksmiths—Firebacks, Tyre Benders, Blocks to make different forms by; Corn and Cob Crusher Castings for Mills; Saw Mill Castings; Cooking Stoves (new and different from any in this market.) Best Family, Extra and Com. Superfine Wheat Flour; Corn and Buckwheat Meal; Corn, Oats, Mill Feed, Seed Grain, Clover and Timothy Seed; Bacon and Lard; Potatoes, Apples, Butter, Eggs and Poultry. In short, everything we have to spare from the farms.

Will be received in a short time a supply of Mamma's patent **CONCAVE CYLINDER CORN SHELLERS**, either for power or hand. It received at the late Fair in Balt. the first premium over all others. The peculiar structure of the cylinder, allows it, to take the end grains off the cob cleaner than any other machine, also separating the shelled corn and cobs. I have the entire right for Carroll and Baltimore Counties and city. I will also furnish to right holders, these machines at wholesale, put up in a superior manner, and at fair rates.—I have also the Vertical Cylinder Corn Shellers, (all cast iron and of great strength) which will shell 100 bushels per hour.

N. B. Address me in Baltimore, or at my residence, New Windsor, Carroll Co., Md.
Jan. 1 **JAS. C. ATLEE.**

PERUVIAN GUANO, Government Importation,

NOW discharging from ship "Albany," direct from the Islands—for sale in quantities to suit purchasers.

I have in store superior new crop **CLOVER SEED.**

Do do **TIMOTHY** do
 Do do **ORCHARD GRASS** do
 Do do **HERDS** do do

Together with every variety of **FIELD and GARDEN SEEDS.**

The attention of farmers is called to my assortment of Farm and Garden Implements and Tools, which they will find as complete as is offered in any Agricultural Warehouse in the United States.

FITZTHUGH COYLE,
 National Agricultural and Seed Warehouse,
 7th street, Washington City.

BUSHROD W. MARRIOTT.

JONATHAN MARRIOTT.

B. W. & J. MARRIOTT,

No. 82, cor. Camden and Light-st. Wharf, (up stairs),

BALTIMORE,

GENERAL COMMISSION AGENTS,

FOR the purchase and sale of all kinds of **AGRICULTURAL PRODUCE.** Guano, Plaster, Lime, and other Fertilizers supplied.

N. B.—Our experience will enable us to purchase on the most favorable terms, Horses, Mules, Cows, Oxen, and other stock.

References—George R. Gaither, Duval & Rogers, Wm. Woodward & Co., Dr. Higgins, State Chemist, W. & H. Miller, Miller's Hotel. Feb. 1-1t

BONE DUST.

THE subscriber will furnish ground Bones, warranted free from every mixture, at 50 cents per bushel.—Also a second quality article, composed in part of Bones, and in part of Flesh of Animals, being a quick and powerful fertilizer, at 35 cts. per bushel.—Col. W. W. Bowler, the well known "Patuxent Planter," who receives his supply of bones from my Factory, says that the "bone dust at 50 cts. per bushel, was the best I ever saw; that at 35 cts. was very fair for the price."—Orders may be left at the "American Farmer" office directed to me, or at the Factory below the Bee's Corner, Canton, near Baltimore, will meet prompt attention. Feb. 1-3t **JOSHUA HORNER.**

A. E. WARNER, No. 10 N. Gay st.

MANUFACTURER OF SILVER WARE, FINE GOLD JEWELRY, and importer of BEST SILVER WARE, FANCY ARTICLES, &c. would respectfully invite the attention of those in want of any of the above articles, that he keeps always on hand, and makes to order, every variety of Silver Ware, fine Gold Jewelry, and best quality Silver Plated Ware, which he will sell on the most accommodating terms. Feb. 1-1t

BOOKBINDING.

WILLIAM C. LYCETT, No. 125 BALTIMORE-ST.,
 Opposite the American Farmer office.

WILL execute all orders in the above business with promptness, in a neat and substantial manner, and in every variety of style, in full or half bound Tur. Morocco, Russia, Calf, Sheep or Muslin at the lowest possible rates, such as Bibles, Magazines, Music and old Books carelessly mended or re-bound. Feb. 1 coly

GUANO

PERUVIAN and PATAGONIA GUANO, late importation, and superior quality—for sale in lots to suit purchasers, by **WM. ROBINSON,**

No. 4 Hollingsworth street, near Pratt St. wharf. Aug. 1. ti. Baltimore

CONTENTS OF THE FEBRUARY NO.

Agr. Soc. by Mr. Holcomb, 253 Brick Tile, how laid,	273
Improvement of Lands. 255 Green Crops for Cattle, "	
Clover Culture, by E. Russell, 257 Guano, price and supply,	
Farm Work or Feb. 260 Ru-t, remedy for, "	274
Garden and Floral do. 263.4 Guano Island, by C. "	
Timber, Drill, Melons, &c. 235 P-s-s—Guano for Tobacco, 275	
Editorial Notices, &c. 253.70 Fish as Manure, "	
A Valuable salve, 259 Value of Leached Ashes, 276	
Farmers' Every Day Book, " Advice for Menowds, "	
Page's Saw Mill, " E Pluribus Unum, reply to, "	
Compost for Corn, 270 'Chappell's' Salt, by W. B. 277	
Agr. Soc. Premiums, " Cornish Neck Club, "	
Importations in Baltimore, 271 Cud Wheat—Pub. Doc. "	
Tobacco Market, " Elements of Plants, "	
A. Shriver on Drills, &c. 272 Markets, &c. 269	